



TOOLING

MEETING TODAY'S DEMAND
FOR **INCREASED SPEED**
AND **SPINDLE LIFE**

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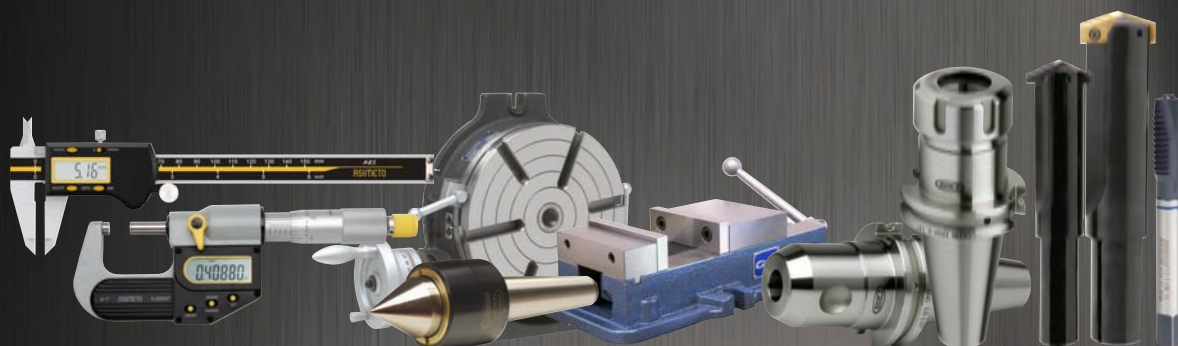


SOWA
METALWORKING SOLUTIONS



***Serving the North American
Metalworking Industry since 1960***

***With stocking locations in Kitchener, Edmonton,
Ohio, Illinois and California***



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MACHINE TOOL ACCESSORIES



End Mill Holders

Pg. 1



Shell Mill Holders

Pg. 11



Collet Chucks

Pg. 17



Shrink Fit Tooling

Pg. 45



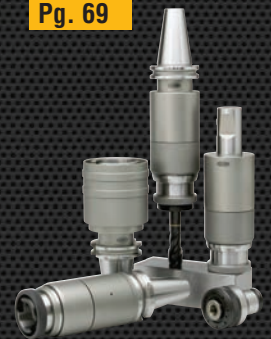
Right Angle Heads/ Spindle Speeders

Pg. 50



Tapping Chucks/ Collets

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Drill Chucks/ Taper Adapters

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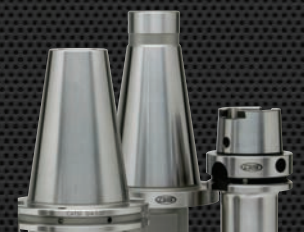
Vises/ Accessories

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Taper Dimensional Data

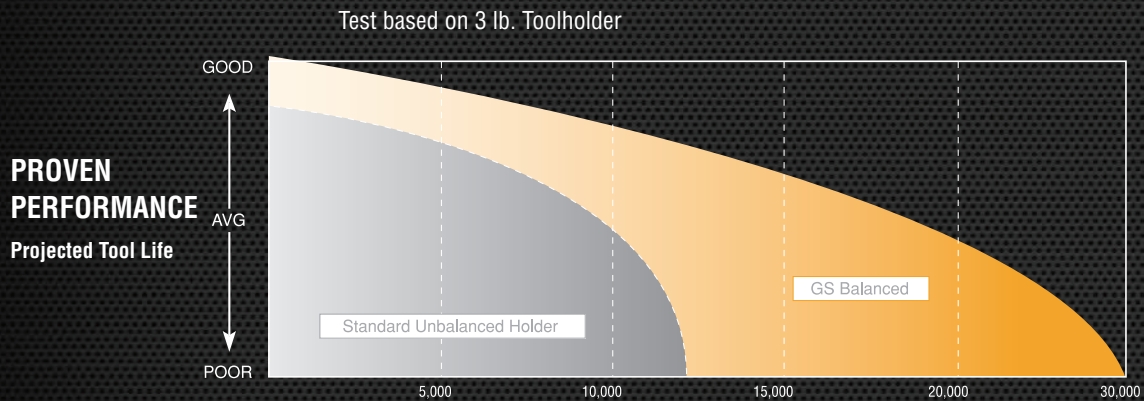
Pg. 93





**NOW PREMIUM BALANCED UP TO
30,000 RPM!**

**MEETING TODAY'S DEMAND
FOR INCREASED SPEED AND SPINDLE LIFE.**

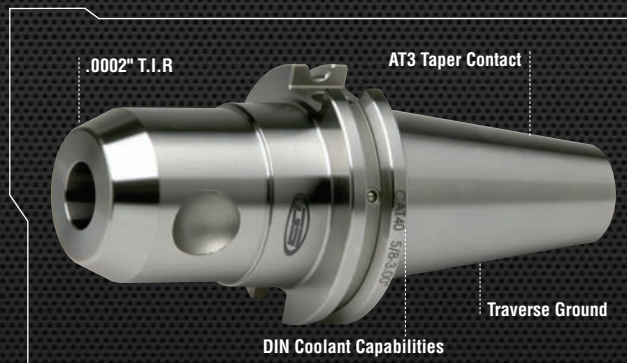


**These are just a few of the benefits of Sowa's
GS Tooling line of pre-balanced Toolholders:**

CAT40 and BT40 End Mill Holders and ER Collet Chucks
Balanced to 30,000 RPM

CAT50 End Mill Holders and ER Collet Chucks Balanced to 25,000 RPM
Traverse ground throughout
DIN Coolant thru the flange
AT3 or better taper accuracy

100% Forged Construction
Maximum TIR 0.0002" O.D. to I.D.
Each holder balanced with Hoffman Machine
Each holder comes with inspection lab report



INTRODUCING DUAL CONTACT HOLDERS & DIRECT COOLANT HOLDERS

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

DUAL CONTACT HOLDERS:

- CAT 40 End Mill Holders Pg. 3
- CAT 50 End Mill Holders Pg. 4
- CAT 40 Shell Mill Holders Pg. 12
- CAT 50 Shell Mill Holders Pg. 12
- CAT 40 ER Collet Chucks Pg. 18
- CAT 50 ER Collet Chucks Pg. 18
- CAT 40 Milling Chucks Pg. 36
- CAT 50 Milling Chucks Pg. 36



DIRECT COOLANT END MILL HOLDERS NOW 3 COOLANT OPTIONS ALL IN ONE!

Features:

- Coolant thru the spindle
- DIN Coolant thru flange option
- Coolant thru the body
- Premium Balanced up to 30,000 rpm
- All Ground Body
- 100% Forged Construction

DIRECT COOLANT END MILL HOLDERS:

- CAT 40 End Mill Holders Pg. 2
- CAT 50 End Mill Holders Pg. 4
- BT 30 End Mill Holders Pg. 5
- BT 40 End Mill Holders Pg. 6
- BT 50 End Mill Holders Pg. 7
- HSK 63A End Mill Holders Pg. 7
- HSK 100A End Mill Holders Pg. 8

Coolant thru slots for directing coolant onto the tool.

O-Ring Seal for Non Direct Coolant Operations.





INTRODUCING NEW PRODUCTS

BALANCEABLE SHRINK FIT HOLDERS

Features:

- With threaded holes in order to balance with supplied balancing screws
- Coolant thru the spindle capability
- Pre-balanced up to 30,000 rpm
- For maximum gripping power with exceptional concentricity.
- Concentricity of $\leq .0001''$ with tool shrunk in holder.
- Tool is gripped 360° along the entire length of bore resulting in an evenly distributed clamping force.
- Back up screws are available on request

See Pg. 45



SA HIGH PRECISION COLLET CHUCKS

Features:

- DIN Coolant thru the flange at no extra charge
- Run out accuracy is $.0001''$ at $4xD$ of the cutting tool shank
- 8° tapered collet seats deeper in the body of the holder providing increased rigidity. This results in concentricity and stronger gripping power.
- Each chuck comes with a collet extractor

See Pg. 30



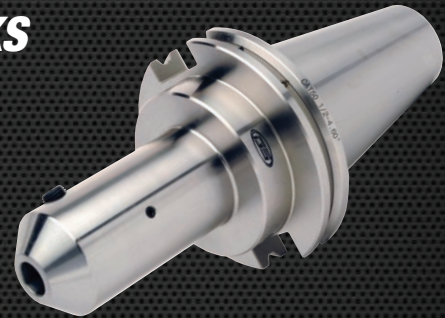
INTRODUCING NEW PRODUCTS

CAT50 AEROSPACE END MILL HOLDERS ACCEPTS END MILLS WITH 5° ANGLED SHANKS

Features:

- DIN Coolant option - standard
- All Ground Body
- 100% Forged Construction
- Accepts end mills with 5° angled shanks
- Premium Balanced up to 25,000 rpm

See Pg. 5



SYNCROLIZE TAPPING SYSTEM TAPPING CHUCK FOR SYNCHRONIZED TAPPING

Features:

- The Syncrolize tapping chuck is the better solution, it gives you the possibility to work with axial compensation
- Tap capacity: M3-M12, M6-M20, M14-M33
- Triple life of tap in comparison to a traditional tapping system
- Quick change of the tap and of the adapter
- Suitable for rigid tapping with micro compensation
- Uses ER Tap Collets

See Pg. 75



ER QUICK CHANGE FLOATING TAP COLLETS WITH AXIAL COMPENSATION

Features:

- For use with any ER collet chuck, these tapping collets help prevent tap breakage on machines requiring axial compensation.
- Friction-free ball-bearing drive.
- Available in ER16, ER20, ER25, ER32

See Pg. 22-25





TOOLING

ADVANCING MANUFACTURING THROUGH EACH TURN. . .

See the difference. GS Tooling can run up to 30,000 RPM without putting unneeded stress on the machine spindle.



END MILL HOLDERS

CAT40 End Mill Holders	2
CAT40 Direct Coolant End Mill Holders	2
CAT40 Dual Contact End Mill Holders	3
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CAT50 Direct Coolant End Mill Holders	4
CAT50 Dual Contact End Mill Holders	4
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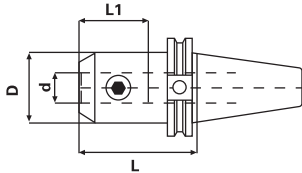


CAT40 End Mill Holders

- DIN Coolant option - standard
- All Ground Body
- 100% Forged Construction



Complete with certificate



Set Screw Pull Stud



pg 9



pg 92

Taper	Hole Dia. (d)	Gauge Length (L)	L1	D	Set Screw	Code No.
CT40	1/8"	1.35**	0.63"	0.75"	8-32	531-069
CT40	1/8"	2.50"	0.63"	0.75"	8-32	531-070
CT40	1/8"	4.00"	0.63"	0.75"	8-32	531-071
CT40	3/16"	1.38**	0.63"	0.75"	10-32	531-072
CT40	3/16"	2.50"	0.86"	0.75"	10-32	531-073
CT40	3/16"	4.00"	0.86"	0.75"	10-32	531-074
CT40	1/4"	1.38**	1.18"	0.79"	1/4-28	531-000
CT40	1/4"	2.50"	1.10"	0.79"	1/4-28	531-002
CT40	1/4"	4.00"	1.10"	0.79"	1/4-28	531-004
CT40	1/4"	9.00"	1.10"	0.79"	1/4-28	531-005
CT40	5/16"	1.38**	1.34"	0.87"	5/16-24	531-006
CT40	5/16"	2.50"	1.26"	0.87"	5/16-24	531-008
CT40	5/16"	4.00"	1.26"	0.87"	5/16-24	531-010
CT40	5/16"	9.00"	1.26"	0.87"	5/16-24	531-011
CT40	3/8"	1.38**	1.34"	1.00"	3/8-24	531-012
CT40	3/8"	2.50"	1.26"	1.00"	3/8-24	531-014
CT40	3/8"	4.00"	1.26"	1.00"	3/8-24	531-016
CT40	3/8"	5.00"	1.26"	1.00"	3/8-24	531-018
CT40	3/8"	9.00"	1.26"	1.00"	3/8-24	531-031
CT40	7/16"	2.50"	1.50"	1.38"	7/16-20	531-020
CT40	7/16"	4.00"	1.50"	1.38"	7/16-20	531-022
CT40	7/16"	9.00"	1.50"	1.38"	7/16-20	531-033
CT40	1/2"	1.75**	1.50"	1.38"	7/16-20	531-024
CT40	1/2"	2.50"	1.50"	1.38"	7/16-20	531-026
CT40	1/2"	4.00"	1.50"	1.38"	7/16-20	531-028
CT40	1/2"	5.00"	1.50"	1.38"	7/16-20	531-030
CT40	1/2"	9.00"	1.50"	1.38"	7/16-20	531-035
CT40	5/8"	1.75**	1.61"	1.65"	9/16-18	531-032
CT40	5/8"	3.00"	1.61"	1.65"	9/16-18	531-034
CT40	5/8"	4.00"	1.61"	1.65"	9/16-18	531-036
CT40	5/8"	5.50"	1.61"	1.65"	9/16-18	531-038
CT40	5/8"	9.00"	1.61"	1.65"	9/16-18	531-037
CT40	3/4"	1.75**	1.77"	1.89"	5/8-18	531-040
CT40	3/4"	3.00"	1.77"	1.75"	5/8-18	531-042
CT40	3/4"	4.00"	1.77"	1.75"	5/8-18	531-044
CT40	3/4"	5.50"	1.77"	1.75"	5/8-18	531-046
CT40	3/4"	9.00"	1.77"	1.75"	5/8-18	531-039
CT40	7/8"	1.75**	2.08"	1.94"	5/8-18	531-048
CT40	7/8"	3.50"	2.08"	2.00"	5/8-18	531-050
CT40	7/8"	6.00"	2.08"	2.00"	5/8-18	531-052
CT40	7/8"	9.00"	2.08"	2.00"	5/8-18	531-041
CT40	1"	2.00**	2.36"	2.25"	3/4-16	531-054
CT40	1"	4.00"	2.36"	2.36"	3/4-16	531-056
CT40	1"	6.00"	2.36"	2.36"	3/4-16	531-058
CT40	1"	9.00"	2.36"	2.36"	3/4-16	531-043
CT40	1-1/4"	2.00**	2.28"	2.25"	3/4-16	531-060
CT40	1-1/4"	4.00"	2.55"	2.48"	3/4-16	531-062
CT40	1-1/4"	6.00"	2.55"	2.48"	3/4-16	531-064
CT40	1-1/2"	4.50"	2.55"	2.99"	3/4-16	531-066
CT40	1-1/2"	6.00"	2.83"	2.99"	3/4-16	531-068

* Stubby Length

CAT40 DIRECT COOLANT End Mill Holders

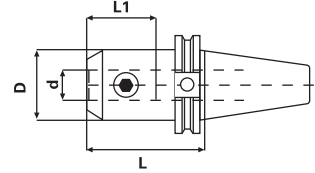
New

NOW 3 COOLANT OPTIONS ALL IN ONE!

- Coolant thru the spindle
- DIN Coolant thru flange option
- Coolant thru the body
- All Ground Body
- 100% Forged Construction



Complete with certificate



Set Screw Pull Stud



pg 9



pg 92

Taper	Hole Dia. (d)	Gauge Length (L)	L1	D	Set Screw	Code No.
CT40	1/8"	1.35**	0.63"	0.75"	8-32	522-002
CT40	1/8"	2.50"	0.63"	0.75"	8-32	522-004
CT40	1/8"	4.00"	0.63"	0.75"	8-32	522-006
CT40	3/16"	1.38**	0.63"	0.75"	10-32	522-008
CT40	3/16"	2.50"	0.86"	0.75"	10-32	522-010
CT40	3/16"	4.00"	0.86"	0.75"	10-32	522-012
CT40	1/4"	1.38**	1.18"	0.79"	1/4-28	522-014
CT40	1/4"	2.50"	1.10"	0.79"	1/4-28	522-016
CT40	1/4"	4.00"	1.10"	0.79"	1/4-28	522-018
CT40	1/4"	9.00"	1.10"	0.79"	1/4-28	522-020
CT40	5/16"	1.38**	1.34"	0.87"	5/16-24	522-022
CT40	5/16"	2.50"	1.26"	0.87"	5/16-24	522-024
CT40	5/16"	4.00"	1.26"	0.87"	5/16-24	522-026
CT40	5/16"	9.00"	1.26"	0.87"	5/16-24	522-028
CT40	3/8"	1.38**	1.34"	1.00"	3/8-24	522-030
CT40	3/8"	2.50"	1.26"	1.00"	3/8-24	522-032
CT40	3/8"	4.00"	1.26"	1.00"	3/8-24	522-034
CT40	3/8"	5.00"	1.26"	1.00"	3/8-24	522-036
CT40	3/8"	9.00"	1.26"	1.00"	3/8-24	522-038
CT40	7/16"	2.50"	1.50"	1.38"	7/16-20	522-040
CT40	7/16"	4.00"	1.50"	1.38"	7/16-20	522-042
CT40	7/16"	9.00"	1.50"	1.38"	7/16-20	522-044
CT40	1/2"	1.75**	1.50"	1.38"	7/16-20	522-046
CT40	1/2"	2.50"	1.50"	1.38"	7/16-20	522-048
CT40	1/2"	4.00"	1.50"	1.38"	7/16-20	522-050
CT40	1/2"	5.00"	1.50"	1.38"	7/16-20	522-052
CT40	1/2"	9.00"	1.50"	1.38"	7/16-20	522-054
CT40	5/8"	1.75**	1.61"	1.65"	9/16-18	522-056
CT40	5/8"	3.00"	1.61"	1.65"	9/16-18	522-058
CT40	5/8"	4.00"	1.61"	1.65"	9/16-18	522-060
CT40	5/8"	5.50"	1.61"	1.65"	9/16-18	522-062
CT40	5/8"	9.00"	1.61"	1.65"	9/16-18	522-064
CT40	3/4"	1.75**	1.77"	1.89"	5/8-18	522-066
CT40	3/4"	3.00"	1.77"	1.75"	5/8-18	522-068
CT40	3/4"	4.00"	1.77"	1.75"	5/8-18	522-070
CT40	3/4"	5.50"	1.77"	1.75"	5/8-18	522-072
CT40	3/4"	9.00"	1.77"	1.75"	5/8-18	522-074
CT40	7/8"	1.75**	2.08"	1.94"	5/8-18	522-076
CT40	7/8"	3.50"	2.08"	2.00"	5/8-18	522-078
CT40	1"	2.00**	2.36"	2.25"	3/4-16	522-080
CT40	1"	4.00"	2.36"	2.36"	3/4-16	522-082
CT40	1"	6.00"	2.36"	2.36"	3/4-16	522-084
CT40	1"	9.00"	2.36"	2.36"	3/4-16	522-086
CT40	1-1/4"	2.00**	2.28"	2.25"	3/4-16	522-088
CT40	1-1/4"	4.00"	2.55"	2.48"	3/4-16	522-090
CT40	1-1/4"	6.00"	2.55"	2.48"	3/4-16	522-092
CT40	1-1/2"	4.50"	2.55"	2.99"	3/4-16	522-094

* Stubby Length

CAT40 DUAL CONTACT End Mill Holders

New

FOR DUAL CONTACT SPINDLES

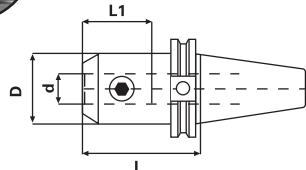
- Improves rigidity and reduces vibration allowing for increased feed rates and increased tool life.
- DIN Coolant option - standard
- All Ground Body
- 100% Forged Construction



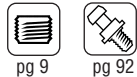
CAT 40
Premium
Balanced
30x
RPM



Complete with certificate



Set Screw Pull Stud



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

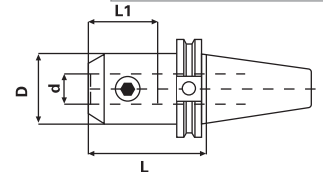
* Stubby Length

CAT50 End Mill Holders

- DIN Coolant option - standard
- All Ground Body
- 100% Forged Construction



Complete with certificate



CAT 50
Premium
Balanced
25x
RPM

Set Screw Pull Stud



Taper	Hole Dia. (d)	Gauge Length (L)	L1	D	Set Screw	Code No.
CT50	1/4"	1.38**	1.10"	0.79"	1/4-28	531-082
CT50	1/4"	2.50"	1.10"	0.79"	1/4-28	531-084
CT50	1/4"	4.00"	1.10"	0.79"	1/4-28	531-086
CT50	1/4"	6.00"	1.10"	0.79"	1/4-28	531-088
CT50	1/4"	8.00"	1.10"	0.79"	1/4-28	531-090
CT50	5/16"	2.50"	1.26"	0.87"	5/16-24	531-092
CT50	5/16"	4.00"	1.26"	0.87"	5/16-24	531-094
CT50	5/16"	6.00"	1.26"	0.87"	5/16-24	531-096
CT50	3/8"	1.38**	1.26"	1.00"	3/8-24	531-098
CT50	3/8"	2.50"	1.26"	1.00"	3/8-24	531-100
CT50	3/8"	4.00"	1.26"	1.00"	3/8-24	531-102
CT50	3/8"	6.00"	1.26"	1.00"	3/8-24	531-104
CT50	3/8"	8.00"	1.26"	1.00"	3/8-24	531-106
CT50	3/8"	14.00"	1.26"	1.00"	3/8-24	531-107
CT50	7/16"	2.50"	1.50"	1.38"	7/16-20	531-108
CT50	7/16"	4.00"	1.50"	1.38"	7/16-20	531-110
CT50	7/16"	6.00"	1.53"	1.38"	7/16-20	531-112
CT50	7/16"	8.00"	1.48"	1.38"	7/16-20	531-114
CT50	7/16"	14.00"	1.48"	1.38"	7/16-20	531-113
CT50	1/2"	1.75**	1.50"	1.38"	7/16-20	531-116
CT50	1/2"	2.63"	1.50"	1.38"	7/16-20	531-118
CT50	1/2"	4.00"	1.50"	1.38"	7/16-20	531-120
CT50	1/2"	6.00"	1.50"	1.38"	7/16-20	531-122
CT50	1/2"	8.00"	1.48"	1.38"	7/16-20	531-124
CT50	1/2"	14.00"	1.48"	1.38"	7/16-20	531-125
CT50	9/16	6.00"	1.61"	1.65"	9/16-18	531-133
CT50	5/8"	1.75**	1.61"	1.65"	9/16-18	531-126
CT50	5/8"	3.00"	1.61"	1.65"	9/16-18	531-128
CT50	5/8"	4.00"	1.61"	1.65"	9/16-18	531-130
CT50	5/8"	6.00"	1.61"	1.65"	9/16-18	531-132
CT50	5/8"	8.00"	1.57"	1.65"	9/16-18	531-134
CT50	5/8"	14.00"	1.57"	1.65"	9/16-18	531-131
CT50	3/4"	1.75**	1.77"	1.89"	5/8-18	531-136
CT50	3/4"	3.00"	1.77"	1.89"	5/8-18	531-138
CT50	3/4"	4.00"	1.77"	1.89"	5/8-18	531-140
CT50	3/4"	6.00"	1.77"	1.89"	5/8-18	531-142
CT50	3/4"	8.00"	1.77"	1.89"	5/8-18	531-144
CT50	3/4"	14.00"	1.77"	1.89"	5/8-18	531-145
CT50	7/8"	1.75**	2.08"	2.00"	5/8-18	531-146
CT50	7/8"	3.75"	2.08"	2.00"	5/8-18	531-148
CT50	7/8"	6.00"	2.08"	2.00"	5/8-18	531-150
CT50	1"	2.00**	2.36"	2.36"	3/4-16	531-152
CT50	1"	4.00"	2.36"	2.36"	3/4-16	531-154
CT50	1"	6.00"	2.36"	2.36"	3/4-16	531-156
CT50	1"	8.00"	2.36"	2.36"	3/4-16	531-158
CT50	1"	14.00"	2.36"	2.36"	3/4-16	531-159
CT50	1-1/4"	2.00**	2.55"	2.75"	3/4-16	531-160
CT50	1-1/4"	4.00"	2.55"	2.48"	3/4-16	531-162
CT50	1-1/4"	6.00"	2.55"	2.48"	3/4-16	531-164
CT50	1-1/4"	8.00"	2.55"	2.48"	3/4-16	531-166
CT50	1-1/4"	14.00"	2.55"	2.48"	3/4-16	531-167
CT50	1-1/2"	2.25**	2.83"	2.75"	3/4-16	531-168
CT50	1-1/2"	4.50"	2.83"	2.99"	3/4-16	531-170
CT50	1-1/2"	7.00"	2.83"	2.99"	3/4-16	531-172
CT50	1-1/2"	9.00"	2.83"	2.99"	3/4-16	531-174
CT50	2"	3.63**	3.34"	3.74"	1"-14	531-176
CT50	2"	5.37"	3.34"	3.74"	1"-14	531-178
CT50	2"	8.00"	3.34"	3.74"	1"-14	531-180
CT50	2"	10.00"	3.34"	3.74"	1"-14	531-182
CT50	2-1/2"	6.00"	3.66"	4.25"	1"-14	531-184

* Stubby Length

CAT50 DIRECT COOLANT End Mill Holders

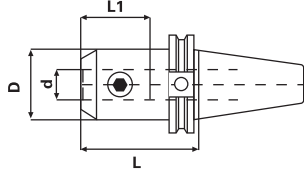
New

NOW 3 COOLANT OPTIONS ALL IN ONE!

- Coolant thru the spindle
- DIN Coolant thru flange option
- Coolant thru the body
- All Ground Body
- 100% Forged Construction



Complete with certificate



Set Screw pg 9
Pull Stud pg 92

CAT 50
Premium
Balanced
25x
RPM

Taper	Hole Dia. (d)	Gauge Length (L)	L1	D	Set Screw	Code No.
CT50	1/4"	1.38**	1.10"	0.79"	1/4-28	522-100
CT50	1/4"	2.50"	1.10"	0.79"	1/4-28	522-102
CT50	1/4"	4.00"	1.10"	0.79"	1/4-28	522-104
CT50	1/4"	6.00"	1.10"	0.79"	1/4-28	522-106
CT50	1/4"	8.00"	1.10"	0.79"	1/4-28	522-108
CT50	5/16"	2.50"	1.26"	0.87"	5/16-24	522-110
CT50	5/16"	4.00"	1.26"	0.87"	5/16-24	522-112
CT50	5/16"	6.00"	1.26"	0.87"	5/16-24	522-114
CT50	3/8"	1.38**	1.26"	1.00"	3/8-24	522-116
CT50	3/8"	2.50"	1.26"	1.00"	3/8-24	522-118
CT50	3/8"	4.00"	1.26"	1.00"	3/8-24	522-120
CT50	3/8"	6.00"	1.26"	1.00"	3/8-24	522-122
CT50	3/8"	8.00"	1.26"	1.00"	3/8-24	522-124
CT50	3/8"	14.00"	1.26"	1.00"	3/8-24	522-126
CT50	7/16"	2.50"	1.50"	1.38"	7/16-20	522-128
CT50	7/16"	4.00"	1.50"	1.38"	7/16-20	522-130
CT50	7/16"	6.00"	1.53"	1.38"	7/16-20	522-132
CT50	1/2"	1.75**	1.50"	1.38"	7/16-20	522-134
CT50	1/2"	2.63"	1.50"	1.38"	7/16-20	522-136
CT50	1/2"	4.00"	1.50"	1.38"	7/16-20	522-138
CT50	1/2"	6.00"	1.50"	1.38"	7/16-20	522-140
CT50	1/2"	8.00"	1.48"	1.38"	7/16-20	522-142
CT50	1/2"	14.00"	1.48"	1.38"	7/16-20	522-144
CT50	9/16"	6.00"	1.61"	1.65"	9/16-18	522-146
CT50	5/8"	1.75**	1.61"	1.65"	9/16-18	522-148
CT50	5/8"	3.00"	1.61"	1.65"	9/16-18	522-150
CT50	5/8"	4.00"	1.61"	1.65"	9/16-18	522-152
CT50	5/8"	6.00"	1.61"	1.65"	9/16-18	522-154
CT50	5/8"	8.00"	1.57"	1.65"	9/16-18	522-156
CT50	3/4"	1.75**	1.77"	1.89"	5/8-18	522-158
CT50	3/4"	3.00"	1.77"	1.89"	5/8-18	522-160
CT50	3/4"	4.00"	1.77"	1.89"	5/8-18	522-162
CT50	3/4"	6.00"	1.77"	1.89"	5/8-18	522-164
CT50	3/4"	8.00"	1.77"	1.89"	5/8-18	522-166
CT50	3/4"	12.00"	1.77"	1.89"	5/8-18	522-167
CT50	3/4"	14.00"	1.77"	1.89"	5/8-18	522-168
CT50	7/8"	1.75**	2.08"	2.00"	5/8-18	522-170
CT50	7/8"	3.75"	2.08"	2.00"	5/8-18	522-172
CT50	7/8"	6.00"	2.08"	2.00"	5/8-18	522-174
CT50	1"	2.00**	2.36"	2.36"	3/4-16	522-176
CT50	1"	4.00"	2.36"	2.36"	3/4-16	522-178
CT50	1"	6.00"	2.36"	2.36"	3/4-16	522-180
CT50	1"	8.00"	2.36"	2.36"	3/4-16	522-182
CT50	1"	12.00"	2.36"	2.36"	3/4-16	522-183
CT50	1"	14.00"	2.36"	2.36"	3/4-16	522-184
CT50	1-1/4"	2.00**	2.55"	2.75"	3/4-16	522-186
CT50	1-1/4"	4.00"	2.55"	2.48"	3/4-16	522-188
CT50	1-1/4"	6.00"	2.55"	2.48"	3/4-16	522-190
CT50	1-1/4"	8.00"	2.55"	2.48"	3/4-16	522-192
CT50	1-1/4"	14.00"	2.55"	2.48"	3/4-16	522-194
CT50	1-1/2"	2.25**	2.83"	2.75"	3/4-16	522-196
CT50	1-1/2"	4.50"	2.83"	2.99"	3/4-16	522-198
CT50	1-1/2"	7.00"	2.83"	2.99"	3/4-16	522-200
CT50	1-1/2"	9.00"	2.83"	2.99"	3/4-16	522-202
CT50	2"	3.63**	3.34"	3.74"	1"-14	522-204
CT50	2"	5.37"	3.34"	3.74"	1"-14	522-206
CT50	2"	8.00"	3.34"	3.74"	1"-14	522-208
CT50	2"	10.00"	3.34"	3.74"	1"-14	522-210
CT50	2-1/2"	6.00"	3.66"	4.25"	1"-14	522-212

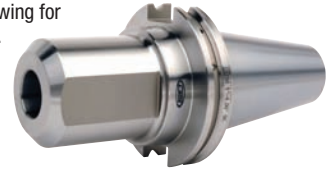
* Stubby Length

CAT50 DUAL CONTACT End Mill Holders

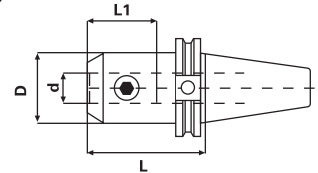
New

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



Complete with certificate



CAT 50
Premium
Balanced
25x
RPM

Set Screw pg 9
Pull Stud pg 92

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

CAT50 Aerospace End Mill Holders

- DIN Coolant option - standard
- All Ground Body
- 100% Forged Construction
- Accepts end mills with 5° angled shanks

CAT 50
Premium
Balanced
25x
RPM

Set Screw Pull Stud



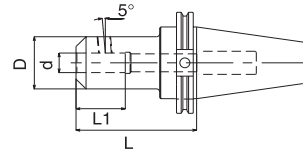
pg 9



pg 92



Complete with certificate



Taper	Hole Dia. (d)	Gauge Length (L)	L1	D	Set Screw	Code No.
CAT50	3/8"	2.82"	1.52"	1.37"	3/8-24	531-700
CAT50	3/8"	4.69"	1.52"	1.37"	3/8-24	531-702
CAT50	3/8"	6.69"	1.52"	1.37"	3/8-24	531-704
CAT50	1/2"	2.73"	1.68"	1.63"	3/8-24	531-706
CAT50	1/2"	4.60"	1.68"	1.63"	3/8-24	531-708
CAT50	1/2"	6.60"	1.68"	1.63"	3/8-24	531-710
CAT50	5/8"	2.66"	1.74"	1.81"	1/2-20	531-712
CAT50	5/8"	4.53"	1.74"	1.81"	1/2-20	531-714
CAT50	5/8"	6.53"	1.74"	1.81"	1/2-20	531-716
CAT50	3/4"	2.63"	2.01"	2.00"	1/2-20	531-718
CAT50	3/4"	4.50"	2.01"	2.00"	1/2-20	531-720
CAT50	3/4"	6.50"	2.01"	2.00"	1/2-20	531-722
CAT50	7/8"	2.63"	2.01"	2.25"	1/2-20	531-724
CAT50	7/8"	4.50"	2.01"	2.25"	1/2-20	531-726
CAT50	7/8"	6.50"	2.01"	2.25"	1/2-20	531-728
CAT50	1"	3.00"	2.27"	2.63"	3/4-16	531-730
CAT50	1"	4.50"	2.27"	2.63"	3/4-16	531-732
CAT50	1"	6.50"	2.27"	2.63"	3/4-16	531-734
CAT50	1-1/4"	3.00"	2.27"	2.87"	3/4-16	531-736
CAT50	1-1/4"	4.50"	2.27"	2.87"	3/4-16	531-738
CAT50	1-1/4"	6.50"	2.27"	2.87"	3/4-16	531-740
CAT50	1-1/2"	4.00"	2.27"	3.25"	3/4-16	531-742
CAT50	2"	5.35"	3.38"	4.00"	3/4-16	531-744
CAT50	2"	7.35"	3.38"	4.00"	3/4-16	531-746
CAT50	2-1/2"	5.35"	3.38"	5.00"	3/4-16	531-748
CAT50	2-1/2"	7.35"	3.38"	5.00"	3/4-16	531-750

BT30 End Mill Holders

- DIN Coolant option - standard
- All Ground Body
- 100% Forged Construction

BT 30
Premium
Balanced
20x
RPM

Set Screw Pull Stud



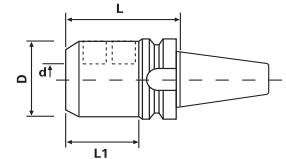
pg 9



pg 92



Complete with certificate



Taper	Hole Dia. (d)	Gauge Length (L)	L1	D	Set Screw	Code No.
BT30	1/8"	2.36"	0.63"	0.75"	8-32	532-001
BT30	3/16"	2.36"	0.87"	0.75"	10-32	532-003
BT30	1/4"	2.36"	1.10"	0.79"	1/4-28	532-000
BT30	5/16"	2.36"	1.26"	0.87"	5/16-24	532-002
BT30	3/8"	2.36"	1.26"	1.00"	3/8-24	532-004
BT30	7/16"	2.36"	1.50"	1.38"	7/16-20	532-006
BT30	1/2"	2.36"	1.50"	1.38"	7/16-20	532-008
BT30	5/8"	2.50"	1.61"	1.65"	9/16-18	532-010
BT30	3/4"	3.00"	1.77"	1.88"	5/8-18	532-012
BT30	7/8"	3.54"	2.09"	2.00"	5/8-18	532-014
BT30	1"	3.54"	2.36"	2.36"	3/4-16	532-016

BT30 DIRECT COOLANT End Mill Holders

New

NOW 3 COOLANT OPTIONS ALL IN ONE!

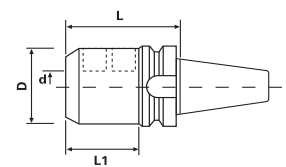
- Coolant thru the spindle
- DIN Coolant thru flange option
- Coolant thru the body
- All Ground Body
- 100% Forged Construction



BT 30
Premium
Balanced
20x
RPM



Complete with certificate



Set Screw Pull Stud



pg 9



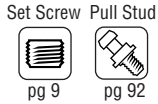
pg 92

Taper	Hole Dia. (d)	Gauge Length (L)	L1	D	Set Screw	Code No.
BT30	1/8"	2.36"	0.63"	0.75"	8-32	522-214
BT30	3/16"	2.36"	0.87"	0.75"	10-32	522-216
BT30	1/4"	2.36"	1.10"	0.79"	1/4-28	522-218
BT30	5/16"	2.36"	1.26"	0.87"	5/16-24	522-220
BT30	3/8"	2.36"	1.26"	1.00"	3/8-24	522-222
BT30	1/2"	2.36"	1.50"	1.38"	7/16-20	522-224
BT30	5/8"	2.50"	1.61"	1.65"	9/16-18	522-226
BT30	3/4"	3.00"	1.77"	1.88"	5/8-18	522-228
BT30	1"	3.54"	2.36"	2.36"	3/4-16	522-230

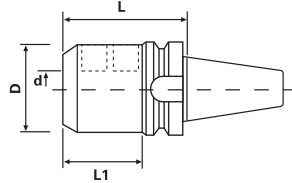
BT40 End Mill Holders

- DIN Coolant option - standard
- All Ground Body
- 100% Forged Construction

BT 40
Premium
Balanced
30x
RPM



Complete with certificate



Taper	Hole Dia. (d)	Gauge Length (L)	L1	D	Set Screw	Code No.
BT40	1/8"	1.38"	0.63"	0.75"	8-32	531-019
BT40	1/8"	2.50"	0.63"	0.75"	8-32	531-021
BT40	1/8"	4.00"	0.63"	0.75"	8-32	531-023
BT40	3/16"	1.38"	0.63"	0.75"	10-32	531-025
BT40	3/16"	2.50"	0.86"	0.75"	10-32	531-027
BT40	3/16"	4.00"	0.86"	0.75"	10-32	531-029
BT40	1/4"	1.38"	1.18"	0.79"	1/4-28	532-018
BT40	1/4"	2.50"	1.10"	0.79"	1/4-28	532-020
BT40	1/4"	4.00"	1.10"	0.79"	1/4-28	532-022
BT40	5/16"	1.38"	1.38"	0.87"	5/16-24	532-024
BT40	5/16"	2.50"	1.26"	0.87"	5/16-24	532-026
BT40	5/16"	4.00"	1.26"	0.87"	5/16-24	532-028
BT40	3/8"	1.38"	1.38"	1.00"	3/8-24	532-030
BT40	3/8"	2.50"	1.26"	1.00"	3/8-24	532-032
BT40	3/8"	4.00"	1.26"	1.00"	3/8-24	532-034
BT40	7/16"	2.50"	1.53"	1.38"	7/16-20	532-036
BT40	1/2"	1.75"	1.57"	1.38"	7/16-20	532-038
BT40	1/2"	2.50"	1.50"	1.38"	7/16-20	532-040
BT40	1/2"	4.00"	1.57"	1.38"	7/16-20	532-042
BT40	5/8"	1.75"	1.61"	1.65"	9/16-18	532-044
BT40	5/8"	2.50"	1.61"	1.65"	9/16-18	532-046
BT40	5/8"	4.00"	1.61"	1.65"	9/16-18	532-048
BT40	3/4"	1.75"	1.77"	1.89"	5/8-18	532-050
BT40	3/4"	2.50"	1.77"	1.89"	5/8-18	532-052
BT40	3/4"	4.00"	1.77"	1.89"	5/8-18	532-054
BT40	7/8"	3.38"	2.08"	2.00"	5/8-18	532-056
BT40	7/8"	6.00"	2.08"	2.00"	5/8-18	532-058
BT40	1"	2.00"	2.28"	2.25"	3/4-16	532-060
BT40	1"	3.56"	2.36"	2.36"	3/4-16	532-062
BT40	1"	6.00"	2.36"	2.36"	3/4-16	532-064
BT40	1-1/4"	2.00"	2.16"	2.25"	3/4-16	532-066
BT40	1-1/4"	3.56"	2.56"	2.48"	3/4-16	532-068
BT40	1-1/4"	6.00"	2.56"	2.48"	3/4-16	532-070
BT40	1-1/2"	4.50"	2.83"	2.99"	3/4-16	532-072
BT40	1-1/2"	6.00"	2.83"	2.99"	3/4-16	532-074

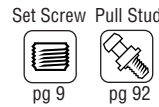
BT40 DIRECT COOLANT End Mill Holders

New

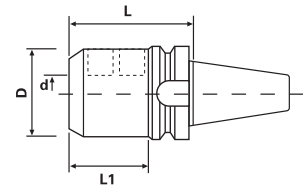
NOW 3 COOLANT OPTIONS ALL IN ONE!

- Coolant thru the spindle
- DIN Coolant thru flange option
- Coolant thru the body
- All Ground Body
- 100% Forged Construction

BT 40
Premium
Balanced
30x
RPM



Complete with certificate



Taper	Hole Dia. (d)	Gauge Length (L)	L1	D	Set Screw	Code No.
BT40	1/8"	1.38"	0.63"	0.75"	8-32	522-232
BT40	1/8"	2.50"	0.63"	0.75"	8-32	522-234
BT40	1/8"	4.00"	0.63"	0.75"	8-32	522-236
BT40	3/16"	2.50"	0.86"	0.75"	10-32	522-238
BT40	3/16"	4.00"	0.86"	0.75"	10-32	522-240
BT40	1/4"	1.38"	1.18"	0.79"	1/4-28	522-242
BT40	1/4"	2.50"	1.10"	0.79"	1/4-28	522-244
BT40	1/4"	4.00"	1.10"	0.79"	1/4-28	522-246
BT40	5/16"	1.38"	1.38"	0.87"	5/16-24	522-248
BT40	5/16"	2.50"	1.26"	0.87"	5/16-24	522-250
BT40	5/16"	4.00"	1.26"	0.87"	5/16-24	522-252
BT40	3/8"	1.38"	1.38"	1.00"	3/8-24	522-254
BT40	3/8"	2.50"	1.26"	1.00"	3/8-24	522-256
BT40	3/8"	4.00"	1.26"	1.00"	3/8-24	522-258
BT40	7/16"	2.50"	1.53"	1.38"	7/16-20	522-260
BT40	1/2"	1.75"	1.57"	1.38"	7/16-20	522-262
BT40	1/2"	2.50"	1.50"	1.38"	7/16-20	522-264
BT40	1/2"	4.00"	1.57"	1.38"	7/16-20	522-266
BT40	5/8"	1.75"	1.61"	1.65"	9/16-18	522-268
BT40	5/8"	2.50"	1.61"	1.65"	9/16-18	522-270
BT40	5/8"	4.00"	1.61"	1.65"	9/16-18	522-272
BT40	3/4"	1.75"	1.77"	1.89"	5/8-18	522-274
BT40	3/4"	2.50"	1.77"	1.89"	5/8-18	522-276
BT40	3/4"	4.00"	1.77"	1.89"	5/8-18	522-278
BT40	7/8"	3.38"	2.08"	2.00"	5/8-18	522-280
BT40	1"	2.00"	2.28"	2.25"	3/4-16	522-282
BT40	1"	3.56"	2.36"	2.36"	3/4-16	522-284
BT40	1"	6.00"	2.36"	2.36"	3/4-16	522-286
BT40	1-1/4"	2.00"	2.16"	2.25"	3/4-16	522-288
BT40	1-1/4"	3.56"	2.56"	2.48"	3/4-16	522-290
BT40	1-1/4"	6.00"	2.56"	2.48"	3/4-16	522-292
BT40	1-1/2"	4.50"	2.83"	2.99"	3/4-16	522-294
BT40	1-1/2"	6.00"	2.83"	2.99"	3/4-16	522-296

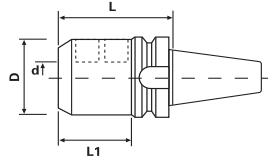
BT50 End Mill Holders

- DIN Coolant option - standard
- All Ground Body
- 100% Forged Construction

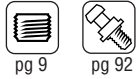
BT 50
Premium
Balanced
25x
RPM



Complete with certificate



Set Screw Pull Stud



Taper	Hole Dia. (d)	Gauge Length (L)	L1	D	Set Screw	Code No.
BT50	3/8"	2.50"	1.26"	1.00"	3/8-24	532-075
BT50	3/8"	5.31"	3.82"	1.00"	3/8-24	532-076
BT50	1/2"	2.75"	1.50"	1.38"	7/16-20	532-077
BT50	1/2"	5.31"	3.82"	1.38"	7/16-20	532-078
BT50	5/8"	3.00"	1.61"	1.65"	9/16-18	532-079
BT50	5/8"	5.31"	3.82"	1.65"	9/16-18	532-081
BT50	3/4"	3.00"	1.46"	1.75"	5/8-18	532-083
BT50	3/4"	6.00"	1.77"	1.75"	5/8-18	532-085
BT50	1"	4.00"	2.64"	2.36"	3/4-16	532-087
BT50	1"	6.00"	4.41"	2.36"	3/4-16	532-089
BT50	1-1/4"	4.00"	2.64"	2.48"	3/4-16	532-091
BT50	1-1/4"	6.00"	2.55"	2.48"	3/4-16	532-093
BT50	1-1/2"	4.50"	2.83"	2.99"	3/4-16	532-095
BT50	1-1/2"	7.00"	2.83"	2.99"	3/4-16	532-097
BT50	2"	4.72"	3.23"	3.86"	1"-14	532-099

BT50 DIRECT COOLANT End Mill Holders

New

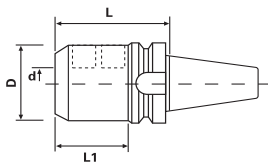
NOW 3 COOLANT OPTIONS ALL IN ONE!

- Coolant thru the spindle
- DIN Coolant thru flange option
- Coolant thru the body
- All Ground Body
- 100% Forged Construction

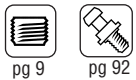
BT 50
Premium
Balanced
25x
RPM



Complete with certificate



Set Screw Pull Stud



Taper	Hole Dia. (d)	Gauge Length (L)	L1	D	Set Screw	Code No.
BT50	3/8"	2.50"	1.26"	1.00"	3/8-24	522-300
BT50	3/8"	5.31"	3.82"	1.00"	3/8-24	522-302
BT50	1/2"	2.75"	1.50"	1.38"	7/16-20	522-304
BT50	1/2"	5.31"	3.82"	1.38"	7/16-20	522-306
BT50	5/8"	3.00"	1.61"	1.65"	9/16-18	522-308
BT50	5/8"	5.31"	3.82"	1.65"	9/16-18	522-310
BT50	3/4"	3.00"	1.46"	1.75"	5/8-18	522-312
BT50	3/4"	6.00"	1.77"	1.75"	5/8-18	522-314
BT50	1"	4.00"	2.64"	2.36"	3/4-16	522-316
BT50	1"	6.00"	4.41"	2.36"	3/4-16	522-318
BT50	1-1/4"	4.00"	2.64"	2.48"	3/4-16	522-320
BT50	1-1/4"	6.00"	2.55"	2.48"	3/4-16	522-322
BT50	1-1/2"	4.50"	2.83"	2.99"	3/4-16	522-324
BT50	1-1/2"	7.00"	2.83"	2.99"	3/4-16	522-326
BT50	2"	4.72"	3.23"	3.86"	1"-14	522-328

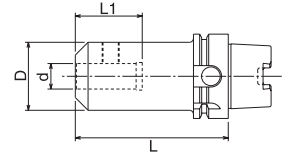
HSK63A End Mill Holders

- Coolant thru capabilities
- All Ground Body
- 100% Forged Construction
- High rigidity & torque transmission

HSK 63
Premium
Balanced
30x
RPM



Complete with certificate



Set Screw



Taper	Hole Dia. (d)	Gauge Length (L)	L1	D	Set Screw	Code No.
HSK63A	3/16"	3.00"	0.866"	0.748"	10-32X1/4	536-002
HSK63A	3/16"	5.00"	0.866"	0.748"	10-32X1/4	536-004
HSK63A	1/4"	3.00"	1.102"	0.787"	1/4-28X1/4	536-006
HSK63A	1/4"	5.00"	1.102"	0.787"	1/4-28X1/4	536-008
HSK63A	5/16"	3.00"	1.417"	0.874"	5/16-24X1/4	536-010
HSK63A	5/16"	5.00"	1.417"	0.874"	5/16-24X1/4	536-012
HSK63A	3/8"	3.50"	1.574"	1.00"	3/8-24X5/16	536-014
HSK63A	3/8"	5.00"	1.574"	1.00"	3/8-24X5/16	536-016
HSK63A	7/16"	4.00"	1.771"	1.378"	7/16-20X3/8	536-018
HSK63A	7/16"	5.00"	1.771"	1.378"	7/16-20X3/8	536-020
HSK63A	1/2"	4.00"	1.771"	1.378"	7/16-20X3/8	536-022
HSK63A	1/2"	5.00"	1.771"	1.378"	7/16-20X3/8	536-024
HSK63A	5/8"	4.00"	1.889"	1.654"	9/16-18X1/2	536-026
HSK63A	5/8"	5.00"	1.889"	1.654"	9/16-18X1/2	536-028
HSK63A	3/4"	4.50"	1.968"	1.889"	5/8-18X1/2	536-030
HSK63A	3/4"	6.00"	1.968"	1.889"	5/8-18X1/2	536-032
HSK63A	1"	4.50"	2.755"	2.363"	3/4-16X11/16 (2)	536-034
HSK63A	1"	6.00"	2.755"	2.363"	3/4-16X11/16 (2)	536-036
HSK63A	1-1/4"	4.50"	2.952"	2.88"	3/4-16X11/16 (2)	536-038
HSK63A	1-1/4"	6.00"	2.952"	2.88"	3/4-16X11/16 (2)	536-040

HSK63A DIRECT COOLANT End Mill Holders

New

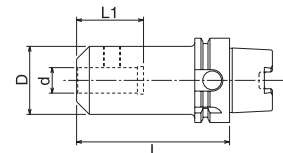
NOW 3 COOLANT OPTIONS ALL IN ONE!

- Coolant thru the spindle
- DIN Coolant thru flange option
- Coolant thru the body
- All Ground Body
- 100% Forged Construction

HSK 63
Premium
Balanced
30x
RPM



Complete with certificate



Set Screw



Taper	Hole Dia. (d)	Gauge Length (L)	L1	D	Set Screw	Code No.
HSK63A	3/16"	5.00"	0.866"	0.748"	10-32X1/4	522-330
HSK63A	1/4"	3.00"	1.102"	0.787"	1/4-28X1/4	522-332
HSK63A	1/4"	5.00"	1.102"	0.787"	1/4-28X1/4	522-334
HSK63A	5/16"	3.00"	1.417"	0.874"	5/16-24X1/4	522-336
HSK63A	5/16"	5.00"	1.417"	0.874"	5/16-24X1/4	522-338
HSK63A	3/8"	3.50"	1.574"	1.00"	3/8-24X5/16	522-340
HSK63A	3/8"	5.00"	1.574"	1.00"	3/8-24X5/16	522-342
HSK63A	1/2"	4.00"	1.771"	1.378"	7/16-20X3/8	522-344
HSK63A	1/2"	5.00"	1.771"	1.378"	7/16-20X3/8	522-346
HSK63A	5/8"	4.00"	1.889"	1.654"	9/16-18X1/2	522-348
HSK63A	3/4"	4.50"	1.968"	1.889"	5/8-18X1/2	522-350
HSK63A	3/4"	6.00"	1.968"	1.889"	5/8-18X1/2	522-352
HSK63A	1"	4.50"	2.755"	2.363"	3/4-16X11/16 (2)	522-354
HSK63A	1"	6.00"	2.755"	2.363"	3/4-16X11/16 (2)	522-356
HSK63A	1-1/4"	4.50"	2.952"	2.88"	3/4-16X11/16 (2)	522-358
HSK63A	1-1/4"	6.00"	2.952"	2.88"	3/4-16X11/16 (2)	522-360

HSK100A End Mill Holders

- Coolant thru capabilities
- All Ground Body
- 100% Forged Construction
- High rigidity & torque transmission

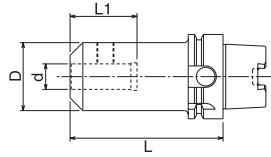


HSK 100
Premium
Balanced
25x
RPM

Set Screw



Complete with certificate



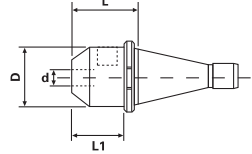
Taper	Hole Dia. (d)	Gauge Length (L)	L1	D	Set Screw	Code No.
HSK100A	3/16"	4.00"	0.867"	0.748"	10-32X1/4	536-042
HSK100A	3/16"	6.00"	0.867"	0.748"	10-32X1/4	536-044
HSK100A	1/4"	4.00"	1.102"	0.787"	1/4-28X1/4	536-046
HSK100A	1/4"	6.00"	1.102"	0.787"	1/4-28X1/4	536-048
HSK100A	5/16"	4.00"	1.220"	0.866"	5/16-24X1/4	536-050
HSK100A	5/16"	6.00"	1.220"	0.866"	5/16-24X1/4	536-052
HSK100A	3/8"	4.00"	1.260"	1.00"	3/8-24X5/16	536-054
HSK100A	3/8"	6.00"	1.260"	1.00"	3/8-24X5/16	536-056
HSK100A	7/16"	4.00"	1.496"	1.378"	7/16-20X3/8	536-058
HSK100A	7/16"	6.00"	1.496"	1.378"	7/16-20X3/8	536-060
HSK100A	1/2"	4.00"	1.575"	1.378"	7/16-20X3/8	536-062
HSK100A	1/2"	6.00"	1.575"	1.378"	7/16-20X3/8	536-064
HSK100A	5/8"	4.00"	1.693"	1.654"	9/16-18X1/2	536-066
HSK100A	5/8"	6.00"	1.693"	1.654"	9/16-18X1/2	536-068
HSK100A	3/4"	4.00"	1.969"	1.890"	5/8-18X1/2	536-070
HSK100A	3/4"	6.00"	1.969"	1.890"	5/8-18X1/2	536-072
HSK100A	1"	4.00"	2.559"	2.362"	3/4-16X11/16 (2)	536-074
HSK100A	1"	6.00"	2.559"	2.362"	3/4-16X11/16 (2)	536-076
HSK100A	1-1/4"	4.00"	2.559"	2.480"	3/4-16X11/16 (2)	536-078
HSK100A	1-1/4"	6.00"	2.559"	2.480"	3/4-16X11/16 (2)	536-080

NMTB40 End Mill Holders

- All Ground Body
- 100% Forged Construction



Set Screw



Taper	Hole Dia. (d)	Gauge Length (L)	L1	D	Set Screw	Code No.
NMTB40	1/4"	2.31"	1.10"	0.79"	1/4-28	534-000
NMTB40	5/16"	2.31"	1.26"	0.87"	5/16-24	534-002
NMTB40	3/8"	2.31"	1.26"	1.00"	3/8-24	534-004
NMTB40	7/16"	2.31"	1.50"	1.38"	7/16-20	534-006
NMTB40	1/2"	2.31"	1.50"	1.38"	7/16-20	534-008
NMTB40	5/8"	2.31"	1.61"	1.65"	9/16-18	534-010
NMTB40	3/4"	2.31"	1.77"	1.89"	5/8-18	534-012
NMTB40	7/8"	2.94"	2.09"	2.01"	5/8-18	534-014
NMTB40	1"	3.37"	2.36"	2.36"	3/4-16	534-016
NMTB40	1-1/4"	3.69"	2.56"	2.48"	3/4-16	534-018
NMTB40	1-1/2"	3.95"	2.56"	2.99"	3/4-16	534-019

HSK100A DIRECT COOLANT End Mill Holders

New

NOW 3 COOLANT OPTIONS ALL IN ONE!

- Coolant thru the spindle
- DIN Coolant thru flange option
- Coolant thru the body
- All Ground Body
- 100% Forged Construction

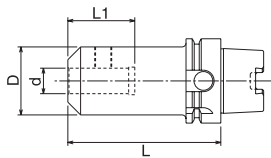


HSK 100
Premium
Balanced
25x
RPM

Set Screw



Complete with certificate



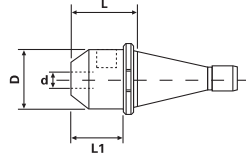
Taper	Hole Dia. (d)	Gauge Length (L)	L1	D	Set Screw	Code No.
HSK100A	1/4"	4.00"	1.102"	0.787"	1/4-28X1/4	522-362
HSK100A	1/4"	6.00"	1.102"	0.787"	1/4-28X1/4	522-364
HSK100A	3/8"	4.00"	1.260"	1.00"	3/8-24X5/16	522-366
HSK100A	1/2"	4.00"	1.575"	1.378"	7/16-20X3/8	522-368
HSK100A	1/2"	6.00"	1.575"	1.378"	7/16-20X3/8	522-370
HSK100A	5/8"	4.00"	1.693"	1.654"	9/16-18X1/2	522-372
HSK100A	5/8"	6.00"	1.693"	1.654"	9/16-18X1/2	522-374
HSK100A	3/4"	4.00"	1.969"	1.890"	5/8-18X1/2	522-376
HSK100A	3/4"	6.00"	1.969"	1.890"	5/8-18X1/2	522-378
HSK100A	1"	4.00"	2.559"	2.362"	3/4-16X11/16 (2)	522-380
HSK100A	1"	6.00"	2.559"	2.362"	3/4-16X11/16 (2)	522-382
HSK100A	1-1/4"	4.00"	2.559"	2.480"	3/4-16X11/16 (2)	522-384
HSK100A	1-1/4"	6.00"	2.559"	2.480"	3/4-16X11/16 (2)	522-386

NMTB50 End Mill Holders

- All Ground Body
- 100% Forged Construction

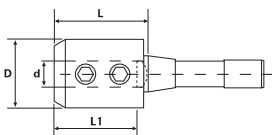


Set Screw



Taper	Hole Dia. (d)	Gauge Length (L)	L1	D	Set Screw	Code No.
NMTB50	1/4"	2.75"	1.10"	0.79"	1/4-28	534-020
NMTB50	3/8"	2.75"	1.26"	1.00"	3/8-24	534-022
NMTB50	3/8"	4.50"	1.26"	1.00"	3/8-24	534-024
NMTB50	1/2"	2.75"	1.50"	1.38"	7/16-20	534-026
NMTB50	1/2"	4.50"	1.50"	1.38"	7/16-20	534-028
NMTB50	5/8"	2.75"	1.61"	1.65"	9/16-18	534-030
NMTB50	5/8"	4.50"	1.61"	1.65"	9/16-18	534-032
NMTB50	3/4"	2.88"	1.77"	1.89"	5/8-18	534-034
NMTB50	3/4"	4.50"	1.77"	1.89"	5/8-18	534-036
NMTB50	7/8"	2.88"	2.09"	2.01"	5/8-18	534-038
NMTB50	7/8"	4.50"	2.09"	2.01"	5/8-18	534-040
NMTB50	1"	3.50"	2.36"	2.36"	3/4-16	534-042
NMTB50	1"	5.50"	2.36"	2.36"	3/4-16	534-044
NMTB50	1-1/4"	3.50"	2.56"	2.48"	3/4-16	534-046
NMTB50	1-1/4"	5.50"	2.56"	2.48"	3/4-16	534-048
NMTB50	1-1/2"	4.00"	2.83"	2.99"	3/4-16	534-050
NMTB50	1-1/2"	6.00"	2.83"	2.99"	3/4-16	534-052
NMTB50	2"	4.69"	3.34"	3.74"	1-14	534-054

R8 End Mill Holders

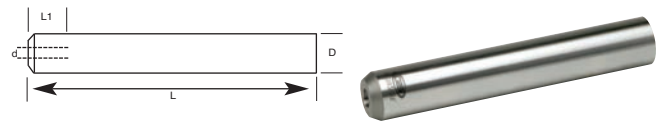


Set Screw



Taper	Hole Dia. (d)	Gauge Length (L)	L1	D	Set Screw	Code No.
R8	1/4"	1.33"	1.10"	0.79"	1/4-28	534-056
R8	5/16"	1.75"	1.26"	0.87"	5/16-24	534-058
R8	3/8"	1.33"	1.26"	1.00"	3/8-24	534-060
R8	7/16"	1.33"	1.50"	1.38"	7/16-20	534-062
R8	1/2"	1.33"	1.50"	1.38"	7/16-20	534-064
R8	5/8"	1.50"	1.61"	1.65"	9/16-18	534-066
R8	3/4"	2.37"	1.77"	1.89"	5/8-18	534-068
R8	7/8"	2.75"	2.36"	2.01"	5/8-18	534-070
R8	1"	3.25"	2.76"	2.36"	3/4-16	534-072
R8	1-1/4"	3.25"	2.56"	2.48"	3/4-16	534-074
R8	1-1/2"	3.75"	2.83"	2.99"	3/4-16	534-076

Straight Shank End Mill Holders

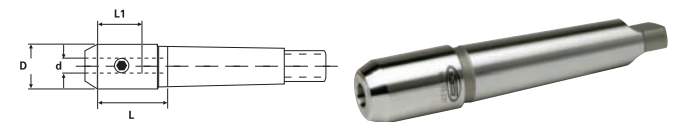


Set Screw



Hole Dia. (d)	Gauge Length (L)	L1	D	Set Screw	Code No.
1/4"	6.00"	1.10"	.750"	1/4-28	534-078
5/16"	6.00"	1.26"	.750"	5/16-24	534-080
3/8"	6.00"	1.26"	1.00"	3/8-24	534-082
1/2"	6.00"	1.49"	1.00"	1/4-28	534-084

Morse Taper End Mill Holders



Set Screw



Taper	Hole Dia. (d)	Gauge Length (L)	L1	D	Set Screw	Code No.
MT#2	1/4"	1.50"	1.07"	0.79"	1/4-28	534-086
MT#2	5/16"	1.50"	1.26"	0.87"	5/16-24	534-088
MT#2	3/8"	1.63"	1.26"	1.00"	3/8-24	534-090
MT#2	1/2"	1.81"	1.53"	1.26"	7/16-20	534-092
MT#3	1/4"	1.50"	1.07"	0.79"	1/4-28	534-094
MT#3	5/16"	1.50"	1.26"	0.87"	5/16-24	534-096
MT#3	3/8"	1.88"	1.26"	1.00"	3/8-24	534-098
MT#3	1/2"	1.94"	1.50"	1.38"	7/16-20	534-100
MT#4	3/8"	2.00"	1.35"	1.00"	3/8-24	534-102
MT#4	1/2"	2.31"	1.46"	1.38"	7/16-20	534-104
MT#4	5/8"	2.50"	1.61"	1.65"	9/16-18	534-106
MT#4	3/4"	2.75"	1.77"	1.89"	5/8-18	534-108

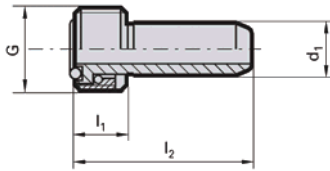
Replacement Set Screws



Size	Size of Holder	Code No.
8-32 x 5/16	1/8	534-109
10-32 x 5/16	3/16	534-111
1/4-28 x 1/4	1/4"	534-110
5/16-24 x 1/4	5/16"	534-112
3/8-24 x 5/16	3/8", 7/16"	534-114
7/16-20 x 3/8	1/2"	534-116
9/16-18 x 1/2	5/8"	534-118
5/8-18 x 1/2	3/4", 7/8"	534-120
3/4-16 x 11/16	1", 1-1/4", 1-1/2"	534-122
1-14 x 7/8	2"	534-124

HSK Coolant Tubes

- Designed specifically to be used with HSK holders
- Leak-proof screwed connection

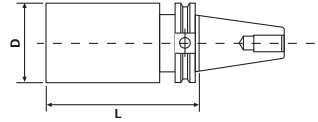


Used with Taper	d1	G	l1	l2	Code No.
HSK63A	12	M18x1	36.5	11.5	536-600
HSK100A	16	M24x1.5	44.0	15.5	536-602

Blank Bars

Blank bars are suitable for all applications, including deep boring. While the tapers are ground and hardened, the projections are not.

- Traverse ground shank to obtain optimum accuracy
- Meets or exceeds ANSI specifications
- Material to be machined - SNM 415H



Pull Stud



Taper	L	D	Code No.
CAT Taper			
CAT 40	13"	2.50"	531-592
CAT 50	13"	3.88"	531-594
BT Taper			
BT 30	8"	2.25"	532-300
BT 40	13"	2.50"	532-302
HSK Taper			
HSK 63	13"	2.50"	531-600
HSK 63	13"	4.00"	531-602
NMTB Taper			
NMTB40	13"	2.50"	534-600
NMTB50	13"	3.88"	534-602



TOOLING

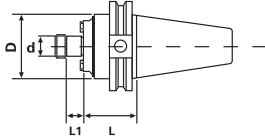
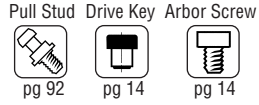
SHELL MILL HOLDERS & MILLING ARBORS

CAT40 Shell Mill Holders	12
CAT40 Dual Contact Shell Mill Holders	12
CAT50 Shell Mill Holders	12
CAT50 Dual Contact Shell Mill Holders	12
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Replacement Drive Keys & Arbor Screws	14
CAT Taper Stub Arbors	15
BT Taper Stub Arbors	15
Replacement Stub Arbor Nuts & Spacers	16



CAT 40 Taper Shell Mill Holders

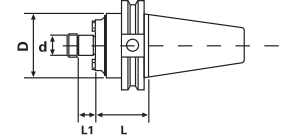
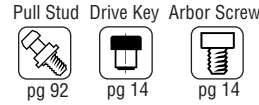
- DIN Coolant thru the flange option - standard
- All Ground Body
- 100% Forged Construction



Taper	d	L	D	L1	Key Size	Arbor Thread	Code No.
CT40	1/2"	1.75"	1.38"	0.57"	1/4"	1/4"-28	531-190
CT40	3/4"	1.75"	1.75"	0.67"	5/16"	3/8"-24	531-192
CT40	3/4"	4.00"	1.75"	0.67"	5/16"	3/8"-24	531-194
CT40	3/4"	6.00"	1.75"	0.67"	5/16"	3/8"-24	531-195
CT40	1"	1.75"	2.38"	0.67"	3/8"	1/2"-20	531-196
CT40	1"	4.00"	2.38"	0.67"	3/8"	1/2"-20	531-198
CT40	1"	6.00"	2.38"	0.67"	3/8"	1/2"-20	531-199
CT40	1-1/4"	2.00"	2.88"	0.67"	1/2"	5/8"-18	531-200
CT40	1-1/4"	4.00"	2.88"	0.67"	1/2"	5/8"-18	531-202
CT40	1-1/4"	6.00"	2.88"	0.67"	1/2"	5/8"-18	531-203
CT40	1-1/2"	2.00"	3.80"	0.93"	5/8"	3/4"-16	531-204
CT40	1-1/2"	4.00"	3.80"	0.93"	5/8"	3/4"-16	531-206

CAT 50 Taper Shell Mill Holders

- DIN Coolant thru the flange option - standard
- All Ground Body
- 100% Forged Construction



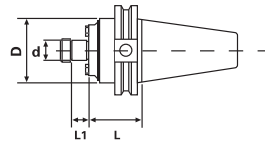
Taper	d	L	D	L1	Key Size	Arbor Thread	Code No.
CT50	3/4"	1.75"	2.00"	0.67"	5/16"	3/8"-24	531-208
CT50	3/4"	4.00"	2.00"	0.67"	5/16"	3/8"-24	531-210
CT50	3/4"	6.00"	2.00"	0.67"	5/16"	3/8"-24	531-212
CT50	1"	1.75"	2.75"	0.69"	3/8"	1/2"-20	531-216
CT50	1"	4.00"	2.75"	0.69"	3/8"	1/2"-20	531-218
CT50	1"	6.00"	2.75"	0.69"	3/8"	1/2"-20	531-220
CT50	1"	8.00"	2.75"	0.69"	3/8"	1/2"-20	531-222
CT50	1-1/4"	1.75"	2.88"	0.69"	1/2"	5/8"-18	531-224
CT50	1-1/4"	4.00"	2.88"	0.69"	1/2"	5/8"-18	531-226
CT50	1-1/4"	6.00"	2.88"	0.69"	1/2"	5/8"-18	531-228
CT50	1-1/4"	8.00"	2.88"	0.69"	1/2"	5/8"-18	531-230
CT50	1-1/2"	2.00"	3.80"	0.93"	5/8"	3/4"-16	531-232
CT50	1-1/2"	4.00"	3.80"	0.93"	5/8"	3/4"-16	531-234
CT50	1-1/2"	6.00"	3.80"	0.93"	5/8"	3/4"-16	531-236
CT50	1-1/2"	8.00"	3.80"	0.93"	5/8"	3/4"-16	531-238
CT50	2"	2.00"	4.38"	0.93"	3/4"	1"-14	531-240
CT50	2"	4.00"	4.38"	0.93"	3/4"	1"-14	531-242

CAT40 DUAL CONTACT Shell Mill Holders

New

FOR DUAL CONTACT SPINDLES

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



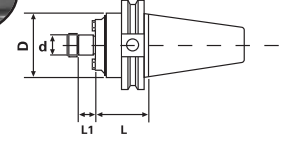
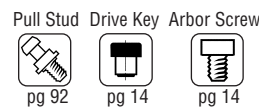
Taper	d	L	D	L1	Key Size	Arbor Thread	Code No.
CT40	3/4"	1.75"	1.75"	0.67"	5/16"	3/8"-24	521-192
CT40	3/4"	4.00"	1.75"	0.67"	5/16"	3/8"-24	521-194
CT40	3/4"	6.00"	1.75"	0.67"	5/16"	3/8"-24	521-195
CT40	1"	1.75"	2.38"	0.67"	3/8"	1/2"-20	521-196
CT40	1"	4.00"	2.38"	0.67"	3/8"	1/2"-20	521-198
CT40	1"	6.00"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

CAT50 DUAL CONTACT Shell Mill Holders

New

FOR DUAL CONTACT SPINDLES

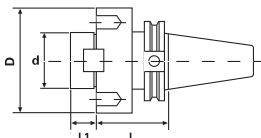
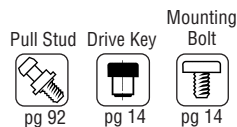
- DIN Coolant thru the flange option - standard
- Improves rigidity and reduces vibration allowing for increased feed rates and increased tool life.
- All Ground Body
- 100% Forged Construction



Taper	d	L	D	L1	Key Size	Arbor Thread	Code No.
CT50	3/4"	1.75"	2.00"	0.67"	5/16"	3/8"-24	521-208
CT50	3/4"	4.00"	2.00"	0.67"	5/16"	3/8"-24	521-210
CT50	3/4"	6.00"	2.00"	0.67"	5/16"	3/8"-24	521-212
CT50	1"	1.75"	2.75"	0.69"	3/8"	1/2"-20	521-216
CT50	1"	4.00"	2.75"	0.69"	3/8"	1/2"-20	521-218
CT50	1"	6.00"	2.75"	0.69"	3/8"	1/2"-20	521-220
CT50	1"	8.00"	2.75"	0.69"	3/8"	1/2"-20	521-222
CT50	1-1/4"	1.75"	2.88"	0.69"	1/2"	5/8"-18	521-224
CT50	1-1/4"	4.00"	2.88"	0.69"	1/2"	5/8"-18	521-226
CT50	1-1/4"	6.00"	2.88"	0.69"	1/2"	5/8"-18	521-228
CT50	1-1/4"	8.00"	2.88"	0.69"	1/2"	5/8"-18	521-230
CT50	1-1/2"	2.00"	3.80"	0.93"	5/8"	3/4"-16	521-232
CT50	1-1/2"	4.00"	3.80"	0.93"	5/8"	3/4"-16	521-234
CT50	1-1/2"	6.00"	3.80"	0.93"	5/8"	3/4"-16	521-236
CT50	1-1/2"	8.00"	3.80"	0.93"	5/8"	3/4"-16	521-238
CT50	2"	2.00"	4.38"	0.93"	3/4"	1"-14	521-240
CT50	2"	4.00"	4.38"	0.93"	3/4"	1"-14	521-242

CAT50 Taper Face Mill Holders

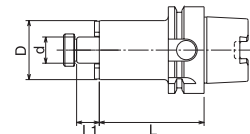
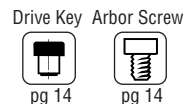
- DIN Coolant option - standard
- All Ground Body
- 100% Forged Construction



Taper	d	L	D	L1	Key Size	Code No.
CT50	2"	2.95"	5.06"	0.86"	3/4"	531-246
CT50	2-1/2"	2.95"	5.00"	1.18"	1"	531-248

HSK Shell Mill Holders

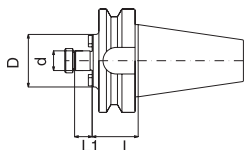
- Coolant thru capabilities
- All Ground Body
- 100% Forged Construction
- High rigidity & torque transmission



Taper	d	L	D	L1	Key Size	Arbor Thread	Code No.
HSK63							
HSK63A	3/4"	3.00"	1.693"	0.669"	5/16"	3/8"-24	536-082
HSK63A	3/4"	5.00"	1.693"	0.669"	5/16"	3/8"-24	536-084
HSK63A	1"	3.00"	2.165"	0.669"	3/8"	1/2"-20	536-086
HSK63A	1"	5.00"	2.165"	0.669"	3/8"	1/2"-20	536-088
HSK63A	1-1/4"	3.00"	2.756"	0.669"	1/2"	5/8"-18	536-090
HSK63A	1-1/4"	5.00"	2.756"	0.669"	1/2"	5/8"-18	536-092
HSK100							
HSK100A	3/4"	4.00"	1.693"	0.669"	5/16"	3/8"-24	536-094
HSK100A	3/4"	6.00"	1.693"	0.669"	5/16"	3/8"-24	536-096
HSK100A	1"	4.00"	2.165"	0.669"	3/8"	1/2"-20	536-098
HSK100A	1"	6.00"	2.165"	0.669"	3/8"	1/2"-20	536-100
HSK100A	1-1/4"	4.00"	2.756"	0.669"	1/2"	5/8"-18	536-102
HSK100A	1-1/4"	6.00"	2.756"	0.669"	1/2"	5/8"-18	536-104
HSK100A	1-1/2"	4.00"	3.504"	0.902"	5/8"	3/4"-16	536-106
HSK100A	1-1/2"	6.00"	3.504"	0.902"	5/8"	3/4"-16	536-108
HSK100A	2"	4.00"	4.488"	0.902"	3/4"	1"-14	536-110
HSK100A	2"	6.00"	4.488"	0.902"	3/4"	1"-14	536-112

BT Taper Shell Mill Holders

- DIN Coolant thru the flange option - standard
- All Ground Body
- 100% Forged Construction



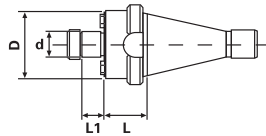
Taper	d	L	D	L1	Key Size	Arbor Thread	Code No.
BT30							
BT30	1/2"	1.19"	1.38"	0.57"	1/4"	1/4"-28	532-080
BT30	3/4"	1.19"	2.00"	0.67"	5/16"	3/8"-24	532-082
BT30	1"	1.19"	2.38"	0.67"	3/8"	1/2"-20	532-084
BT40							
BT40	1/2"	1.75"	1.38"	0.57"	1/4"	1/4"-28	532-086
BT40	3/4"	1.75"	1.75"	0.67"	5/16"	3/8"-24	532-088
BT40	3/4"	4.00"	1.75"	0.67"	5/16"	3/8"-24	532-111
BT40	3/4"	6.00"	1.75"	0.67"	5/16"	3/8"-24	532-114
BT40	1"	1.75"	2.38"	0.67"	3/8"	1/2"-20	532-090
BT40	1"	4.00"	2.38"	0.67"	3/8"	1/2"-20	532-115
BT40	1"	6.00"	2.38"	0.67"	3/8"	1/2"-20	532-117
BT40	1-1/4"	2.00"	2.88"	0.67"	1/2"	5/8"-18	532-092
BT40	1-1/4"	4.00"	2.88"	0.67"	1/2"	5/8"-18	532-119
BT40	1-1/4"	6.00"	2.88"	0.67"	1/2"	5/8"-18	532-121
BT40	1-1/2"	2.00"	3.80"	0.92"	5/8"	3/4"-16	532-094
BT50							
BT50	1"	1.75"	2.75"	0.69"	3/8"	1/2"-20	532-101
BT50	1-1/4"	1.75"	2.88"	0.69"	1/2"	5/8"-18	532-103
BT50	1-1/2"	1.75"	3.80"	0.92"	5/8"	3/4"-16	532-105
BT50	2"	1.75"	4.38"	0.92"	3/4"	1"-14	532-107

NMTB Taper Shell Mill Holders

- All Ground Body
- 100% Forged Construction



Drive Key Arbor Screw



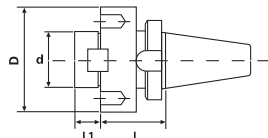
Taper	d	L	D	L1	Key Size	Arbor Thread	Code No.
NMTB40							
NMTB40	1/2"	0.87"	1.38"	0.57"	1/4"	1/4"-28	534-130
NMTB40	3/4"	0.87"	1.94"	0.67"	5/16"	3/8"-24	534-132
NMTB40	1"	1.31"	2.38"	0.67"	3/8"	1/2"-20	534-134
NMTB40	1-1/4"	1.50"	2.88"	0.67"	1/2"	5/8"-18	534-136
NMTB40	1-1/2"	1.63"	3.50"	0.93"	5/8"	3/4"-16	534-138
NMTB50							
NMTB50	3/4"	1.25"	2.00"	0.67"	5/16"	3/8"-24	534-140
NMTB50	1"	1.88"	2.38"	0.67"	3/8"	1/2"-20	534-142
NMTB50	1-1/4"	1.88"	2.88"	0.67"	1/2"	5/8"-18	534-144
NMTB50	1-1/2"	1.88"	3.50"	0.93"	5/8"	3/4"-16	534-146
NMTB50	2"	1.88"	4.38"	0.93"	3/4"	1"-14	534-148

NMTB50 Taper Face Mill Holders

- All Ground Body
- 100% Forged Construction

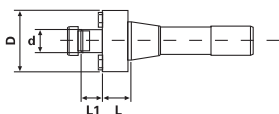


Mounting Drive Key Bolt



Taper	d	L	D	L1	Key Size	Code No.
NMTB50	2"	3.00"	5.05"	0.87"	3/4"	534-150
NMTB50	2-1/2"	3.00"	5.00"	1.18"	1"	534-152

R8 Shell Mill Holders



Drive Key Arbor Screw



Taper	d	L	D	L1	Key Size	Arbor Thread	Code No.
R8	1/2"	1.00"	1.38"	0.57"	1/4"	1/4"-28	534-154
R8	3/4"	1.00"	2.00"	0.69"	5/16"	3/8"-24	534-156
R8	1"	1.00"	2.38"	0.69"	3/8"	1/2"-20	534-158
R8	1-1/4"	1.00"	2.88"	0.69"	1/2"	5/8"-18	534-160
R8	1-1/2"	1.75"	3.50"	0.94"	5/8"	3/4"-16	534-162

Replacement Drive Keys



Spigot Dia.	Description	Code No.
1/2	Two 1/4" Drive keys	534-164
3/4	Two 5/16"	534-166
1	Two 3/8"	534-168
1-1/4	Two 1/2"	534-170
1-1/2	Two 5/8"	534-172
2	Two 3/4"	534-174
2-1/2	Two 1"	534-176

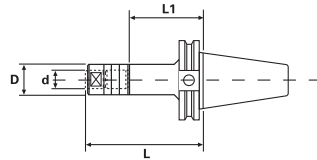
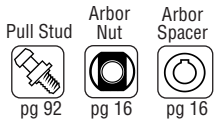
Replacement Arbor Screws



Thread Size	Size of Holder	Code No.
5/8-11	Face Mill Mounting Bolt	534-178
1/4-28	1/2"	534-180
3/8-24	3/4"	534-182
1/2-20	1"	534-184
5/8-18	1-1/4"	534-186
3/4-16	1-1/2"	534-188
1-14	2"	534-190

CAT Taper Stub Arbors

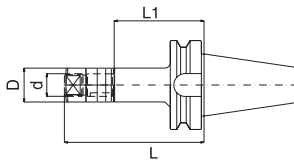
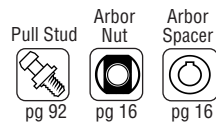
- Each arbor equipped with 1/8, 1/4, 3/8, 1/2 spacers



Taper	d	L	D	L1	Code No.
CAT40					
CT40	1"	6.17"	1.50"	4.00"	531-580
CT40	1-1/4"	6.29"	1.75"	4.00"	531-582
CT40	1-1/2"	6.60"	2.12"	4.00"	531-584
CAT50					
CT50	1"	6.17"	1.50"	4.00"	531-586
CT50	1-1/4"	6.28"	1.75"	4.00"	531-588
CT50	1-1/2"	6.60"	2.12"	4.00"	531-590

BT Taper Stub Arbors

- Each arbor equipped with 1/8, 1/4, 3/8, 1/2 spacers



Taper	d	L	D	L1	Code No.
BT30					
BT30	3/4"	4.97"	1.25"	3.00"	532-290
BT30	1"	5.17"	1.50"	3.00"	532-292
BT40					
BT40	1"	5.18"	1.50"	3.00"	532-294
BT40	1-1/4"	5.32"	1.75"	3.00"	532-296
BT40	1-1/2"	5.60"	2.12"	3.00"	532-298

Replacement Stub Arbor Spacers



Description	Code No.
1/8" Spacer for 3/4" Holder	534-568
1/4" Spacer for 3/4" Holder	534-570
3/8" Spacer for 3/4" Holder	534-572
1/2" Spacer for 3/4" Holder	534-574
1/8" Spacer for 1" Holder	534-576
1/4" Spacer for 1" Holder	534-578
3/8" Spacer for 1" Holder	534-580
1/2" Spacer for 1" Holder	534-582
1/8" Spacer for 1-1/4" Holder	534-584
1/4" Spacer for 1-1/4" Holder	534-586
3/8" Spacer for 1-1/4" Holder	534-588
1/2" Spacer for 1-1/4" Holder	534-590
1/8" Spacer for 1-1/2" Holder	534-592
1/4" Spacer for 1-1/2" Holder	534-594
3/8" Spacer for 1-1/2" Holder	534-596
1/2" Spacer for 1-1/2" Holder	534-598

Replacement Stub Arbor Nuts



Holder Size	Code No.
3/4"	534-560
1"	534-562
1-1/4"	534-564
1-1/2"	534-566

COLLET CHUCKS & COLLETS

CAT, BT, HSK, NMTB & R8 ER Collet Chucks	18-20
ER Collet Chuck Extensions	20
ER Collets	21-27
ER Collet Sets	27,28
ER Collet Chuck Sets	20
ER Chuck Nuts, Wrenches, Backup Screws	29
SA Collet Chucks	30
SA Collets	31
TG Collet Chucks	32
TG 75, 100, 150 Collets & Sets	33-35
TG Chuck Nuts, Wrenches, Backup Screws	35
Milling Chucks & Collets	36-38
DA Collet Chucks	39
DA Collets	40-42
DA Chuck Parts	42
Type 25 & 32 Collet Sets	43
Type 25 & Type 32 Collets	43
5C Collets & Set	44
R8 Collets & Set	44



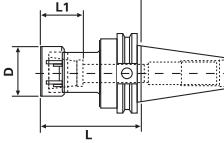
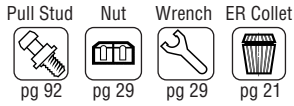
CAT40 ER Collet Chucks

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



Complete with certificate

CAT 40
Premium
Balanced
30x
RPM



Taper	Collet Series	Collet Range	L	L1	D	Code No.
CT40	ER11**	.019-.275"	2.50"	0.65"	0.75"	531-400
CT40	ER11**	.019-.275"	4.00"	0.65"	0.75"	531-402
CT40	ER11**	.019-.275"	6.00"	0.65"	0.75"	531-404
CT40	ER16**	.019-.406"	2.50"	0.87"	1.26"	531-406
CT40	ER16**	.019-.406"	3.50"	0.87"	1.26"	531-408
CT40	ER16**	.019-.406"	4.00"	0.87"	1.26"	531-405
CT40	ER16**	.019-.406"	6.00"	0.87"	1.26"	531-410
CT40	ER16**	.019-.406"	9.00"	0.87"	1.26"	531-411
CT40	ER20**	.039-.511"	2.50"	1.06"	1.38"	531-412
CT40	ER20**	.039-.511"	4.00"	1.06"	1.38"	531-414
CT40	ER20**	.039-.511"	6.00"	1.06"	1.38"	531-416
CT40	ER20**	.039-.511"	9.00"	1.06"	1.38"	531-417
CT40	ER25	.039-.629"	2.50"	1.18"	1.65"	531-418
CT40	ER25	.039-.629"	4.00"	1.18"	1.65"	531-420
CT40	ER25	.039-.629"	6.00"	1.18"	1.65"	531-422
CT40	ER32	.078-.787"	.750"			531-401*
CT40	ER32	.078-.787"	2.50"	1.34"	1.97"	531-421
CT40	ER32	.078-.787"	3.13"	1.34"	1.97"	531-424
CT40	ER32	.078-.787"	4.00"	1.34"	1.97"	531-423
CT40	ER32	.078-.787"	5.00"	1.34"	1.97"	531-426
CT40	ER32	.078-.787"	6.00"	1.34"	1.97"	531-425
CT40	ER32	.078-.787"	9.00"	1.34"	1.97"	531-419
CT40	ER40	.118-1.023"	2.50"	1.50"	2.48"	531-427
CT40	ER40	.118-1.023"	3.13"	1.50"	2.48"	531-428
CT40	ER40	.118-1.023"	4.00"	1.50"	2.48"	531-429
CT40	ER40	.118-1.023"	5.00"	1.50"	2.48"	531-430
CT40	ER40	.118-1.023"	6.00"	1.50"	2.48"	531-431

* ER Shorty collet chuck

** Hex Nut

CAT40 DUAL CONTACT ER Collet Chucks

New

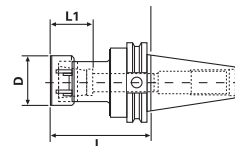
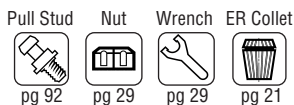
FOR DUAL CONTACT SPINDLES

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



Complete with certificate

CAT 40
Premium
Balanced
30x
RPM



Taper	Collet Series	Collet Range	L	L1	D	Code No.
CT40	ER16**	.019-.406"	2.50"	0.87"	1.26"	521-406
CT40	ER16**	.019-.406"	4.00"	0.87"	1.26"	521-405
CT40	ER16**	.019-.406"	6.00"	0.87"	1.26"	521-410
CT40	ER32	.078-.787"	3.13"	1.34"	1.97"	521-424
CT40	ER32	.078-.787"	4.00"	1.34"	1.97"	521-423
CT40	ER32	.078-.787"	6.00"	1.34"	1.97"	521-425

** Hex Nut

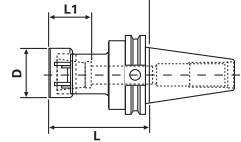
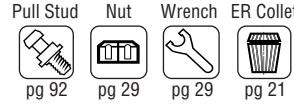
CAT50 ER Collet Chucks

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



Complete with certificate

CAT 50
Premium
Balanced
25x
RPM



Taper	Collet Series	Collet Range	L	L1	D	Code No.
CT50	ER16**	.019-.406"	4.12"	0.87"	1.26"	531-432
CT50	ER16**	.019-.406"	6.00"	0.87"	1.26"	531-434
CT50	ER16**	.019-.406"	8.00"	0.87"	1.26"	531-436
CT50	ER16**	.019-.406"	12.00"	0.87"	1.26"	531-437
CT50	ER20**	.039-.511"	2.50"	1.06"	1.38"	531-438
CT50	ER20**	.039-.511"	4.00"	1.06"	1.38"	531-440
CT50	ER20**	.039-.511"	6.00"	1.06"	1.38"	531-442
CT50	ER20**	.039-.511"	8.00"	1.06"	1.38"	531-444
CT50	ER20**	.039-.511"	12.00"	1.06"	1.38"	531-445
CT50	ER25	.039-.629"	2.50"	1.18"	1.65"	531-446
CT50	ER25	.039-.629"	4.00"	1.18"	1.65"	531-448
CT50	ER25	.039-.629"	6.00"	1.18"	1.65"	531-450
CT50	ER25	.039-.629"	8.00"	1.18"	1.65"	531-452
CT50	ER32	.078-.787"	.750"			531-403*
CT50	ER32	.078-.787"	4.00"	1.34"	1.97"	531-454
CT50	ER32	.078-.787"	6.00"	1.34"	1.97"	531-456
CT50	ER32	.078-.787"	8.00"	1.34"	1.97"	531-458
CT50	ER32	.078-.787"	12.00"	1.34"	1.97"	531-459
CT50	ER40	.118-1.023"	4.00"	1.50"	2.48"	531-460
CT50	ER40	.118-1.023"	6.00"	1.50"	2.48"	531-462
CT50	ER40	.118-1.023"	8.00"	1.50"	2.48"	531-464
CT50	ER40	.118-1.023"	12.00"	1.50"	2.48"	531-465

* ER Shorty collet chuck

** Hex Nut

CAT50 DUAL CONTACT ER Collet Chucks

New

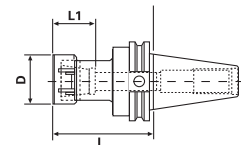
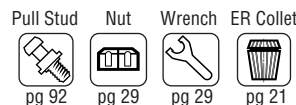
FOR DUAL CONTACT SPINDLES

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



Complete with certificate

CAT 50
Premium
Balanced
25x
RPM



Taper	Collet Series	Collet Range	L	L1	D	Code No.
CT50	ER16**	.019-.406"	4.12"	0.87"	1.26"	521-432
CT50	ER16**	.019-.406"	6.00"	0.87"	1.26"	521-434
CT50	ER16**	.019-.406"	8.00"	0.87"	1.26"	521-436
CT50	ER32	.078-.787"	4.00"	1.34"	1.97"	521-454
CT50	ER32	.078-.787"	6.00"	1.34"	1.97"	521-456
CT50	ER32	.078-.787"	8.00"	1.34"	1.97"	521-458

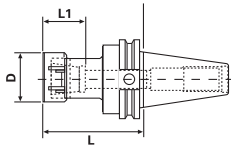
** Hex Nut

BT Taper ER Collet Chucks

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



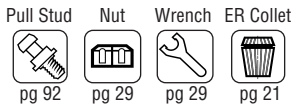
Complete with certificate



BT 30
Premium
Balanced
20x
RPM

BT 40
Premium
Balanced
30x
RPM

BT 50
Premium
Balanced
25x
RPM



Taper	Collet Series	Collet Range	L	L1	D	Code No.
BT30						
BT30	ER11**	.019-.275"	2.00"	0.65"	0.75"	532-150
BT30	ER11**	.019-.275"	4.00"	0.65"	0.75"	532-152
BT30	ER16**	.019-.406"	2.36"	0.87"	1.26"	532-154
BT30	ER16**	.019-.406"	4.00"	0.87"	1.26"	532-156
BT30	ER16**	.019-.406"	5.00"	0.87"	1.26"	532-158
BT30	ER16**	.019-.406"	6.00"	0.87"	1.26"	532-160
BT30	ER20**	.039-.511"	2.50"	1.06"	1.38"	532-162
BT30	ER20**	.039-.511"	4.00"	1.06"	1.38"	532-164
BT30	ER25	.039-.629"	2.00"	1.18"	1.65"	532-166
BT30	ER25	.039-.629"	4.00"	1.18"	1.65"	532-168
BT30	ER32	.078-.787"	3.00"	1.34"	1.97"	532-170
BT30	ER32	.078-.787"	5.00"	1.34"	1.97"	532-172
BT40						
BT40	ER11**	.019-.275"	2.50"	0.65"	0.75"	532-174
BT40	ER11**	.019-.275"	4.00"	0.65"	0.75"	532-176
BT40	ER11**	.019-.275"	6.00"	0.65"	0.75"	532-178
BT40	ER16**	.019-.406"	3.50"	0.87"	1.26"	532-180
BT40	ER16**	.019-.406"	5.00"	0.87"	1.26"	532-182
BT40	ER20**	.039-.511"	2.50"	1.06"	1.38"	532-184
BT40	ER20**	.039-.511"	4.00"	1.06"	1.38"	532-186
BT40	ER20**	.039-.511"	6.00"	1.06"	1.38"	532-188
BT40	ER25	.039-.629"	2.25"	1.18"	1.65"	532-190
BT40	ER25	.039-.629"	4.00"	1.18"	1.65"	532-192
BT40	ER25	.039-.629"	6.00"	1.18"	1.65"	532-194
BT40	ER32	.078-.787"	1.06"			532-191*
BT40	ER32	.078-.787"	3.13"	1.34"	1.97"	532-196
BT40	ER32	.078-.787"	5.00"	1.34"	1.97"	532-198
BT40	ER40	.118-1.023"	3.13"	1.50"	2.50"	532-200
BT40	ER40	.118-1.023"	5.00"	1.50"	2.50"	532-202
BT50						
BT50	ER16**	.019-.406"	2.50"	0.87"	1.26"	532-203
BT50	ER16**	.019-.406"	4.00"	0.87"	1.26"	532-204
BT50	ER25	.039-.629"	2.75"	1.18"	1.65"	532-205
BT50	ER25	.039-.629"	4.00"	1.18"	1.65"	532-206

* ER Shorty collet chuck

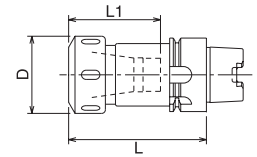
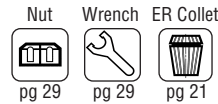
** Hex Nut

HSK63 ER Collet Chucks

- Coolant thru capabilities
- All Ground Body
- 100% Forged Construction
- High rigidity & torque transmission
- Wrench not included



HSK 63
Premium
Balanced
30x
RPM



Taper	Collet Series	Collet Range	L	L1	D	Code No.
HSK63A	ER16**	.019-.393"	3.00"	0.866"	1.260"	536-114
HSK63A	ER16**	.019-.393"	5.00"	0.866"	1.260"	536-116
HSK63A	ER20**	.039-.511"	3.00"	1.062"	1.378"	536-118
HSK63A	ER20**	.039-.511"	5.00"	1.062"	1.378"	536-120
HSK63A	ER25	.039-.629"	3.00"	1.181"	1.654"	536-122
HSK63A	ER25	.039-.629"	5.00"	1.181"	1.654"	536-124
HSK63A	ER32	.078-.787"	4.00"	1.260"	1.969"	536-126
HSK63A	ER32	.078-.787"	6.00"	1.260"	1.969"	536-128
HSK63A	ER40	.118-1.023"	4.00"	1.496"	2.480"	536-130
HSK63A	ER40	.118-1.023"	6.00"	1.496"	2.480"	536-132

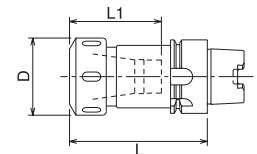
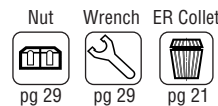
** Hex Nut

HSK100 ER Collet Chucks

- Coolant thru capabilities
- All Ground Body
- 100% Forged Construction
- High rigidity & torque transmission
- Wrench not included



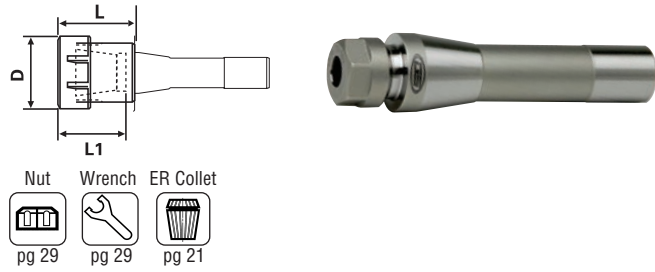
HSK 100
Premium
Balanced
25x
RPM



Taper	Collet Series	Collet Range	L	L1	D	Code No.
HSK100A	ER16**	.019-.393"	4.00"	0.866"	1.260"	536-134
HSK100A	ER16**	.019-.393"	6.00"	0.866"	1.260"	536-136
HSK100A	ER20**	.039-.511"	4.00"	1.062"	1.378"	536-138
HSK100A	ER20**	.039-.511"	6.00"	1.062"	1.378"	536-140
HSK100A	ER25	.039-.629"	4.00"	1.181"	1.654"	536-142
HSK100A	ER25	.039-.629"	6.00"	1.181"	1.654"	536-144
HSK100A	ER32	.078-.787"	4.00"	1.260"	1.969"	536-146
HSK100A	ER32	.078-.787"	6.00"	1.260"	1.969"	536-148
HSK100A	ER40	.118-1.023"	4.00"	1.496"	2.480"	536-150
HSK100A	ER40	.118-1.023"	6.00"	1.496"	2.480"	536-152

** Hex Nut

R8 Taper ER Collet Chucks

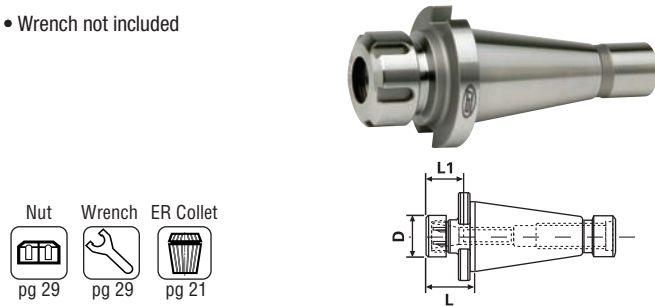


Taper	Collet Series	Collet Range	L	L1	D	Code No.
R8	ER16**	.019-.406"	1.25"	2.83"	1.25"	534-360
R8	ER20**	.039-.511"	2.00"	1.50"	1.38"	534-362
R8	ER25	.039-.629"	2.50"	1.64"	1.66"	534-364

** Hex Nut

NMTB Taper ER Collet Chucks

• Wrench not included

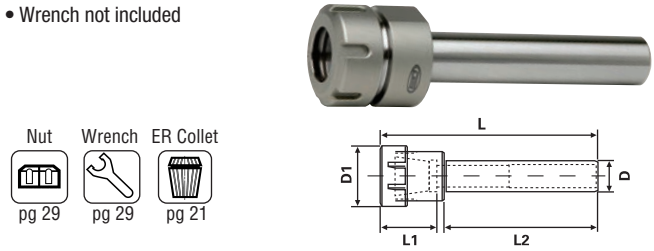


Taper	Collet Series	Collet Range	L	L1	D	Code No.
NMTB40						
NMTB40	ER11**	.019-.275"	2.00"	0.65"	0.75"	534-350
NMTB40	ER16**	.019-.406"	1.77"	0.87"	1.26"	534-352
NMTB40	ER25	.039-.629"	2.00"	1.18"	1.65"	534-354
NMTB50						
NMTB50	ER16**	.019-.406"	2.00"	0.87"	1.26"	534-356
NMTB50	ER25	.039-.629"	2.00"	1.18"	1.65"	534-358

** Hex Nut

ER Collet Chuck Extensions

• Wrench not included



Collet Series	Collet Range	Shank Dia. (D)	D1	L	L1	L2	Code No.
ER11**	.019-.275"	1/2	.740"	6.11"	.091"	5.00"	534-368
ER11**	.019-.275"	5/8	.740"	6.11"	.091"	5.00"	534-370
ER11**	.019-.275"	3/4	.740"	5.65"	.091"	5.00"	534-372
ER16**	.019-.406"	5/8	1.26"	6.48"	1.28"	5.00"	534-374
ER16**	.019-.406"	3/4	1.26"	6.48"	1.28"	5.00"	534-376
ER16**	.019-.406"	1	1.26"	5.89"	1.28"	5.00"	534-378
ER20**	.039-.511"	3/4	1.38"	6.67"	1.48"	5.00"	534-380
ER20**	.039-.511"	1	1.38"	6.40"	1.48"	5.00"	534-382
ER20**	.039-.511"	1-1/4	1.38"	6.40"	1.48"	5.00"	534-384
ER25	.039-.629"	3/4	1.65"	6.85"	1.65"	5.00"	534-386
ER25	.039-.629"	1	1.65"	6.85"	1.65"	5.00"	534-388
ER25	.039-.629"	1-1/4	1.65"	6.00"	1.65"	5.00"	534-390
ER32	.078-.787"	1	1.97"	7.09"	1.85"	5.00"	534-392
ER32	.078-.787"	1-1/4	1.97"	6.30"	2.13	4.00"	337-805
ER32	.078-.787"	1-1/4	1.97"	7.09"	1.85"	5.00"	534-394

** Hex Nut

ER Collet Chuck Sets

• Wrench included



Shank	Collet Set	Code No.
ER-16		
3/4 x 4	10 collets in set (range .019 - .393)	337-700
3/4 x 6	10 collets in set (range .019 - .393)	337-705
R-8	10 collets in set (range .019 - .393)	337-710
ER-20		
3/4 x 4	12 collets in set (range .039 - .511)	337-715
3/4 x 6	12 collets in set (range .039 - .511)	337-720
ER-32		
1-1/4 x 4	11 collets in set (range .080 - .787)	337-730
ISO-30	11 collets in set (range .080 - .787)	337-735
R-8	11 collets in set (range .080 - .787)	337-740
ER-40		
R-8	15 collets in set (range .120 - 1.020)	337-745
ISO-30	15 collets in set (range .120 - 1.020)	337-750
ISO-40	15 collets in set (range .120 - 1.020)	337-755
ISO-50	23 collets in set (range .120 - 1.020)	337-760

ER 11 Collets

Our ER collet system is made of special elastic 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.

- Size range: 0.5 mm - 7 mm (0.019" - 0.275")
- ER11 collets collapse approximately 1/64" with full accuracy



REGULAR

Size (in.)	Size (mm)	Code No.
.019-.039"	0.5-1	337-650
.039-.059"	1-1.5	337-652
.059-.078"	1.5-2	337-654
.078-.098"	2-2.5	337-656
.098-.118"	2.5-3	337-658
.118-.137"	3-3.5	337-660
.137-.157"	3.5-4	337-662
.157-.177"	4-4.5	337-664
.177-.196"	4.5-5	337-666
.196-.216"	5-5.5	337-668
.216-.236"	5.5-6	337-670
.236-.255"	6-6.5	337-672
.255-.275"	6.5-7	337-674
Inch Collets		
3/64		337-609
1/16		337-610
5/64		337-611
3/32		337-613
7/64		337-614
1/8		337-615
9/64		337-617
5/32		337-618
11/64		337-619
3/16		337-651
13/64		337-653
7/32		337-655
15/64		337-657
1/4		337-659
17/64		337-661

- See page 27,28- for Sets
- See page 28 for Dimensional Data

ER 11 Sealed Collets

- Rubber Sealed for coolant through applications
- Pressure resistance tested to 1000 psi
- Size range: 3/6 - 17/64", 4.0 - 7.0 mm



	Size (in/mm)	Code No.
Inch	3/16	337-622
	13/64	337-624
	7/32	337-626
	15/64	337-628
	1/4	337-630
	17/64	337-632
Metric	4.0	337-634
	4.5	337-636
	5.0	337-638
	5.5	337-640
	6.0	337-642
	6.5	337-644
	7.0	337-646

ER 16 Collets

Our ER collet system is made of special elastic 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.

- Size range: 0.5mm-10mm (0.019"-0.393")
- ER 16 collets collapse approximately 1/32" with full accuracy



REGULAR

Size (in.)	Size (mm)	Code No.
.019-.039"	0.5-1	337-302
.039-.078"	1-2	337-304
.078-.118"	2-3	337-306
.118-.157"	3-4	337-308
.157-.196"	4-5	337-310
.196-.236"	5-6	337-312
.236-.275"	6-7	337-314
.275-.314"	7-8	337-316
.314-.354"	8-9	337-318
.354-.393"	9-10	337-320

Inch Collets

1/16	337-531
3/32	337-532
1/8	337-533
5/32	337-534
3/16	337-535
7/32	337-536
1/4	337-537
9/32	337-538
5/16	337-540
11/32	337-541
3/8	337-542
13/32	337-543

ER 16 Tap Collets

- For synchronous, rigid tapping operations using ER collet chuck
- Collet bore is exact tool diameter with square drive for accuracy and rigidity



ANSI Tap Inch	ANSI Tap Metric	Shank Dia.	Size of Square	Code No.
0-6	M1.6-M3.5	.141"	.110"	337-850
8	M4	.168"	.131"	337-851
10	M4.5, M5	.194"	.152"	337-852
12		.220"	.165"	337-853
1/4	M6, M6.3	.255"	.191"	337-854
5/16	M7, M8	.318"	.238"	337-855

- See page 27,28- for Sets
- See page 28 for Dimensional Data

ER 16 Sealed Collets

- Steel Sealed for coolant through applications
- Pressure resistance tested to 1000 psi



	Size (in/mm)	Code No.
Inch	1/8	337-841
	5/32	337-842
	3/16	337-843
	13/64	337-826
	7/32	337-844
	15/64	337-827
	1/4	337-845
	17/64	337-828
	9/32	337-846
	19/64	337-829
	5/16	337-847
	21/64	337-831
	11/32	337-848
	23/64	337-832
	3/8	337-849
	25/64	337-833
13/32	337-834	
Metric	4.0	338-292
	4.5	338-294
	5.0	338-296
	5.5	338-298
	6.0	338-300
	6.5	338-302
	7.0	338-304
	7.5	338-305
	8.0	338-306
	8.5	338-307
	9.0	338-308
9.5	338-309	
10.0	338-310	

ER 16 Quick Change Floating Tap Collets

New

With Axial Compensation

- For use with any ER collet chuck, these tapping collets help prevent tap breakage on machines requiring axial compensation. Friction-free ball-bearing drive.



ANSI Tap Inch	ANSI Tap Metric	Shank Dia.	Size of Square	Code No.
0-6	M1.6-M3.5	.141"	.110"	338-750
8	M4	.168"	.131"	338-751
10	M4.5, M5	.194"	.152"	338-752

ER 20 Collets

Our ER collet system is made of special elastic 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.

- Size range: 1 mm-13 mm (0.039"-0.511")
- ER 20 collets collapse approximately 1/32" with full accuracy



REGULAR

Size (in.)	Size (mm)	Code No.
.039-.078"	1-2	337-473
.078-.118"	2-3	337-474
.098-.137"	2.5-3.5	337-471
.118-.157"	3-4	337-475
.157-.196"	4-5	337-476
.196-.236"	5-6	337-477
.236-.275"	6-7	337-478
.275-.314"	7-8	337-479
.314-.354"	8-9	337-480
.354-.393"	9-10	337-481
.393-.433"	10-11	337-482
.433-.452"	11-11.5	337-469
.433-.472"	11-12	337-483
.472-.511"	12-13	337-484

Inch Collets

1/16	337-621
3/32	337-623
1/8	337-663
5/32	337-665
3/16	337-667
7/32	337-669
1/4	337-671
9/32	337-673
5/16	337-675
11/32	337-676
3/8	337-677
13/32	337-678
7/16	337-679
15/32	337-681
1/2	337-682

ER 20 Tap Collets

- For synchronous, rigid tapping operations using ER collet chuck
- Collet bore is exact tool diameter with square drive for accuracy and rigidity



ANSI Tap Inch	ANSI Tap Metric	Shank Dia.	Size of Square	Code No.
0-6	M1.6-M3.5	.141"	.110"	337-869
8	M4	.168"	.131"	337-870
10	M4.5, M5	.194"	.152"	337-871
12		.220"	.165"	337-872
1/4	M6, M6.3	.255"	.191"	337-873
5/16	M7, M8	.318"	.238"	337-874
3/8	M10	.381"	.286"	337-875
7/16		.323"	.242"	337-876
1/2	M12, M12.5	.367"	.275"	337-877

- See page 27,28- for Sets
- See page 28 for Dimensional Data

ER 20 Sealed Collets

- Steel Sealed for coolant through applications
- Pressure resistance tested to 1000 psi



	Size (in/mm)	Code No.
Inch	1/8	337-856
	5/32	337-857
	3/16	337-858
	7/32	337-859
	1/4	337-860
	9/32	337-861
	5/16	337-862
	11/32	337-863
	3/8	337-864
	13/32	337-865
	7/16	337-866
	15/32	337-867
	1/2	337-868
Metric	4.0	338-325
	5.0	338-330
	5.5	338-334
	6.0	338-336
	6.5	338-337
	7.0	338-338
	7.5	338-339
	8.0	338-340
	8.5	338-341
	9.0	338-342
	9.5	338-343
	10.0	338-344
	10.5	338-345
11.0	338-346	
11.5	338-347	
12.0	338-348	
12.5	338-349	
13.0	338-350	

ER 20 Quick Change Floating Tap Collets

New

With Axial Compensation

- For use with any ER collet chuck, these tapping collets help prevent tap breakage on machines requiring axial compensation. Friction-free ball-bearing drive.



ANSI Tap Inch	ANSI Tap Metric	Shank Dia.	Size of Square	Code No.
0-6	M1.6-M3.5	.141"	.110"	338-753
8	M4	.168"	.131"	338-754
10	M4.5, M5	.194"	.152"	338-755
12		.220"	.165"	338-756
1/4	M6, M6.3	.255"	.191"	338-757

ER 25 Collets

Our ER collet system is made of special elastic 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.



REGULAR

Size (in.)	Size (mm)	Code No.
.039-.078	1-2	337-330
.078-.118	2-3	337-332
.098-.137	2.5-3.5	337-333
.118-.157	3-4	337-334
.157-.196	4-5	337-336
.196-.236	5-6	337-338
.236-.275	6-7	337-340
.275-.314	7-8	337-342
.314-.354	8-9	337-344
.354-.393	9-10	337-346
.393-.433	10-11	337-348
.433-.452	11-11.5	337-349
.433-.472	11-12	337-350
.472-.511	12-13	337-352
.511-.551	13-14	337-354
.551-.590	14-15	337-356
.590-.629	15-16	337-358
Inch Collets		
1/8		337-683
5/32		337-684
3/16		337-685
7/32		337-686
1/4		337-687
9/32		337-688
5/16		337-689
11/32		337-691
3/8		337-692
13/32		337-693
7/16		337-694
15/32		337-696
1/2		337-697
17/32		337-698
9/16		337-699
19/32		337-701
5/8		337-702

ER 25 Tap Collets

- For synchronous, rigid tapping operations using ER collet chuck
- Collet bore is exact tool diameter with square drive for accuracy and rigidity



ANSI Tap Inch	ANSI Tap Metric	Shank Dia.	Size of Square	Code No.
0-6	M1.6-M3.5	.141"	.110"	337-895
8	M4	.168"	.131"	337-896
10	M4.5, M5	.194"	.152"	337-897
12		.220"	.165"	337-898
1/4	M6, M6.3	.255"	.191"	337-899
5/16	M7, M8	.318"	.238"	337-900
3/8	M10	.381"	.286"	337-901
7/16		.323"	.242"	337-902
1/2	M12, M12.5	.367"	.275"	337-903
9/16	M14	.429"	.322"	337-904
5/8	M16	.480"	.360"	337-905
NPT				
1/16, 1/8-SS		.3125"	.234"	337-909
1/8-LS		.4375"	.328"	337-910

- See page 27,28- for Sets
- See page 28 for Dimensional Data

ER 25 Sealed Collets

- Steel Sealed for coolant through applications
- Pressure resistance tested to 1000 psi



Inch Size	Inch Code No.	Metric Size	Inch Code No.
1/8	337-878	4.0	338-327
5/32	337-879	5.0	338-329
3/16	337-880	6.0	338-360
7/32	337-881	6.5	338-362
1/4	337-882	7.0	338-364
17/64	338-352	7.5	338-366
9/32	337-883	8.0	338-368
19/64	338-354	8.5	338-370
5/16	337-884	9.0	338-372
21/64	338-356	9.5	338-374
11/32	337-885	10.0	338-376
23/64	338-358	10.5	338-378
3/8	337-886	11.0	338-380
25/64	337-916	11.5	338-382
13/32	337-887	12.0	338-384
27/64	337-917	12.5	338-386
7/16	337-888	13.0	338-388
29/64	337-918	13.5	338-390
15/32	337-889	14.0	338-392
31/64	337-919	14.5	338-394
1/2	337-890	15.0	338-396
33/64	337-920	15.5	338-398
17/32	337-891	16.0	338-400
35/64	337-921		
9/16	337-892		
37/64	337-922		
19/32	337-893		
39/64	337-923		
5/8	337-894		

ER 25 Quick Change Floating Tap Collets

New

With Axial Compensation

- For use with any ER collet chuck, these tapping collets help prevent tap breakage on machines requiring axial compensation. Friction-free ball-bearing drive.



ANSI Tap Inch	ANSI Tap Metric	Shank Dia.	Size of Square	Code No.
0-6	M1.6-M3.5	.141"	.110"	338-758
8	M4	.168"	.131"	338-759
10	M4.5, M5	.194"	.152"	338-760
12		.220"	.165"	338-761
1/4	M6, M6.3	.255"	.191"	338-762
5/16	M7, M8	.318"	.238"	338-763
7/16		.323"	.242"	338-764
1/2	M12, M12.5	.367"	.275"	338-765

ER 32 Collets

Our ER collet system is made of special elastic 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.



REGULAR

Size (in.)	Size (mm)	Code No.
.078-.118	2-3	337-361
.098-.137	2.5-3.5	337-359
.118-.157	3-4	337-362
.157-.196	4-5	337-363
.196-.236	5-6	337-364
.236-.275	6-7	337-365
.275-.314	7-8	337-366
.314-.354	8-9	337-367
.354-.393	9-10	337-368
.393-.433	10-11	337-369
.413-.452	10.5-11.5	337-357
.433-.472	11-12	337-370
.472-.511	12-13	337-371
.511-.551	13-14	337-372
.551-.590	14-15	337-373
.590-.629	15-16	337-374
.629-.669	16-17	337-375
.669-.708	17-18	337-376
.708-.748	18-19	337-377
.728-.767	18.5-19.5	337-355
.748-.787	19-20	337-378
Inch Collets		
1/8		337-703
5/32		337-704
3/16		337-706
7/32		337-707
1/4		337-708
9/32		337-709
5/16		337-711
11/32		337-712
3/8		337-713
13/32		337-714
7/16		337-716
15/32		337-717
1/2		337-718
17/32		337-719
9/16		337-721
19/32		337-722
5/8		337-723
21/32		337-724
11/16		337-725
23/32		337-726
3/4		337-727

ER 32 Quick Change Floating Tap Collets

New

With Axial Compensation

• For use with any ER collet chuck, these tapping collets help prevent tap breakage on machines requiring axial compensation. Friction-free ball-bearing drive.



ANSI Tap Inch	ANSI Tap Metric	Shank Dia.	Size of Square	Code No.
0-6	M1.6-M3.5	.141"	.110"	338-766
8	M4	.168"	.131"	338-767
10	M4.5, M5	.194"	.152"	338-768
12		.220"	.165"	338-769
1/4	M6, M6.3	.255"	.191"	338-770
5/16	M7, M8	.318"	.238"	338-771
3/8	M10	.381"	.286"	338-772
7/16		.323"	.242"	338-773
1/2	M12, M12.5	.367"	.275"	338-774
9/16	M14	.429"	.322"	338-775
NPT				
1/16, 1/8-SS		.3125"	.234"	338-776
1/8-LS		.4375"	.328"	338-777
1/4		.5625"	.421"	

ER 32 Sealed Collets

- Steel Sealed for coolant through applications
- Pressure resistance tested to 1000 psi



Inch Size	Code No.	Metric Size	Code No.
1/8	338-200	4.0	338-353
5/32	338-201	5.0	338-355
3/16	338-202	6.0	338-320
7/32	338-203	7.0	338-357
1/4	338-204	8.0	338-324
17/64	338-301	9.0	338-359
9/32	338-205	10.0	338-328
19/64	338-303	10.5	338-404
5/16	338-206	11.0	338-406
21/64	338-311	12.0	338-332
11/32	338-207	12.5	338-408
23/64	338-312	13.0	338-410
3/8	338-208	13.5	338-412
25/64	338-313	14.0	338-414
13/32	338-209	14.5	338-416
27/64	338-314	15.0	338-418
7/16	338-210	15.5	338-420
29/64	338-315	16.0	338-422
15/32	338-211	16.5	338-424
31/64	338-316	17.0	338-426
1/2	338-212	17.5	338-428
33/64	338-317	18.0	338-430
17/32	338-213	18.5	338-432
35/64	338-318	19.0	338-434
9/16	338-214	19.5	338-436
37/64	338-319	20.0	338-438
19/32	338-215		
39/64	338-321		
5/8	338-216		
41/64	337-924		
21/32	338-217		
43/64	337-925		
11/16	338-218		
45/64	337-926		
23/32	338-219		
47/64	337-927		
3/4	338-220		
49/64	337-928		
25/32	338-322		

ER 32 Tap Collets

- For synchronous, rigid tapping operations using ER collet chuck
- Collet bore is exact tool diameter with square drive for accuracy and rigidity



ANSI Tap Inch	ANSI Tap Metric	Shank Dia.	Size of Square	Code No.
0-6	M1.6-M3.5	.141"	.110"	338-221
8	M4	.168"	.131"	338-222
10	M4.5, M5	.194"	.152"	338-223
12		.220"	.165"	338-224
1/4	M6, M6.3	.255"	.191"	338-225
5/16	M7, M8	.318"	.238"	338-226
3/8	M10	.381"	.286"	338-227
7/16		.323"	.242"	338-228
1/2	M12, M12.5	.367"	.275"	338-229
9/16	M14	.429"	.322"	338-230
5/8	M16	.480"	.360"	338-231
11/16	M18	.542"	.406"	338-232
3/4		.590"	.442"	338-233
13/16	M20	.652"	.489"	338-234
NPT				
1/16, 1/8-SS		.3125"	.234"	338-235
1/8-LS		.4375"	.328"	338-236
1/4		.5625"	.421"	338-237

ER 40 Collets

Our ER collet system is made of special elastic 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.



REGULAR

Size (in.)	Size (mm)	Code No.
.118-.157	3-4	337-501
.157-.196	4-5	337-502
.196-.236	5-6	337-503
.236-.275	6-7	337-505
.275-.314	7-8	337-506
.314-.354	8-9	337-507
.354-.393	9-10	337-509
.393-.433	10-11	337-510
.413-.452	10.5-11.5	337-498
.433-.472	11-12	337-511
.472-.511	12-13	337-513
.511-.551	13-14	337-514
.551-.590	14-15	337-515
.590-.629	15-16	337-517
.629-.669	16-17	337-518
.669-.708	17-18	337-519
.708-.748	18-19	337-521
.728-.767	18.5-19.5	337-496
.748-.787	19-20	337-522
.787-.826	20-21	337-523
.826-.866	21-22	337-524
.866-.905	22-23	337-525
.905-.944	23-24	337-526
.944-.984	24-25	337-527
.984-1.023	25-26	337-528
Inch Collets		
1/8		337-728
5/32		337-729
3/16		337-731
7/32		337-732
1/4		337-733
9/32		337-734
5/16		337-736
11/32		337-737
3/8		337-738
13/32		337-739
7/16		337-741
15/32		337-742
1/2		337-743
17/32		337-744
9/16		337-746
19/32		337-747
5/8		337-748
21/32		337-749
11/16		337-751
23/32		337-752
3/4		337-753
25/32		337-754
13/16		337-756
27/32		337-757
7/8		337-758
29/32		337-759
15/16		337-761
31/32		337-762
1		337-763

- See page 27,28- for Sets
- See page 28 for Dimensional Data

ER 40 Sealed Collets

- Steel Sealed for coolant through applications
- Pressure resistance tested to 1000 psi



Inch Size	Code No.	Metric Size	Code No.
1/8	338-238	6.0	338-441
5/32	338-239	7.0	338-443
3/16	338-240	8.0	338-445
7/32	338-241	9.0	338-447
1/4	338-242	10.0	338-440
9/32	338-243	10.5	338-442
5/16	338-244	11.0	338-444
11/32	338-245	11.5	338-446
3/8	338-246	12.0	338-448
13/32	338-247	12.5	338-450
7/16	338-248	13.0	338-452
15/32	338-249	13.5	338-454
1/2	338-250	14.0	338-456
17/32	338-251	14.5	338-458
9/16	338-252	15.0	338-460
19/32	338-253	15.5	338-462
5/8	338-254	16.0	338-464
21/32	338-255	16.5	338-468
11/16	338-256	17.0	338-470
23/32	338-257	17.5	338-472
3/4	338-258	18.0	338-474
25/32	338-259	18.5	338-476
13/16	338-260	19.0	338-478
27/32	338-261	19.5	338-480
7/8	338-262	20.0	338-482
29/32	338-263	20.5	338-484
15/16	338-264	21.0	338-486
31/32	338-265	21.5	338-488
1	338-266	22.0	338-490
		22.5	338-492
		23.0	338-494
		23.5	338-496
		24.0	338-498
		24.5	338-500
		25.0	338-502
		25.5	338-504
		26.0	338-506

ER 40 Tap Collets

- For synchronous, rigid tapping operations using ER collet chuck
- Collet bore is exact tool diameter with square drive for accuracy and rigidity



ANSI Tap Inch	ANSI Tap Metric	Shank Dia.	Size of Square	Code No.
0-6	M1.6-M3.5	.141"	.110"	338-267
8	M4	.168"	.131"	338-268
10	M4.5, M5	.194"	.152"	338-269
12		.220"	.165"	338-270
1/4	M6, M6.3	.255"	.191"	338-271
5/16	M7, M8	.318"	.238"	338-272
3/8	M10	.381"	.286"	338-273
7/16		.323"	.242"	338-274
1/2	M12, M12.5	.367"	.275"	338-275
9/16	M14	.429"	.322"	338-276
5/8	M16	.480"	.360"	338-277
11/16	M18	.542"	.406"	338-278
3/4		.590"	.442"	338-279
13/16	M20	.652"	.489"	338-280
7/8	M22	.697"	.523"	338-281
15/16	M24	.760"	.570"	338-282
1	M25	.800"	.600"	338-283
NPT				
1/16, 1/8-SS		.3125"	.234"	338-284
1/8-LS		.4375"	.328"	338-285
1/4		.5625"	.421"	338-286
3/8		.7000"	.531"	338-287
1/2		.6875"	.515"	338-288

ER 50 Collets

Our ER collet system is made of special elastic 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.



- Size Range: .394" - 1.339"
- ER50 collets collapse approximately 5/64" with full accuracy

Size (in.)	Size (mm)	Code No.
.394-.472	10-12	337-450
.472-.551	12-14	337-452
.551-.630	14-16	337-454
.630-.709	16-18	337-456
.709-.789	18-20	337-458
.789-.866	20-22	337-460
.866-.945	22-24	337-461
.945-1.024	24-26	337-462
1.024-1.102	26-28	337-464
1.102-1.181	28-30	337-466
1.181-1.260	30-32	337-468
1.260-1.339	32-34	337-470
Inch Collets		
13/32		337-764
7/16		337-778
15/32		337-779
1/2		337-781
17/32		337-782
9/16		337-783
19/32		337-784
5/8		337-786
21/32		337-787
11/16		337-788
23/32		337-789
3/4		337-794
25/32		337-795
13/16		337-796
27/32		337-797
7/8		337-798
29/32		337-799
15/16		337-801
31/32		337-802
1		337-803
1-1/32		337-804
1-1/16		337-806
1-3/32		337-807
1-3/16		337-808
1-5/32		337-809
1-3/16		337-811
1-7/32		337-812
1-1/4		337-813
1-9/32		337-814
1-5/16		337-816

ER Collet Sets



* Case may not be as shown



ER11 / 13 Pieces		ER16 / 10 Pieces		ER20 / 12 Pieces		ER25 / 15 Pieces	
Code No.	Size	Code No.	Size	Code No.	Size	Code No.	Size
337-379		337-380		337-382		337-383	
337-650	.019-.039	337-302	.019-.039	337-473	.039-.078	337-330	.039-.078
337-652	.039-.058	337-304	.039-.078	337-474	.078-.118	337-332	.078-.118
337-654	.059-.078	337-306	.078-.118	337-475	.118-.157	337-334	.118-.157
337-656	.078-.098	337-308	.118-.157	337-476	.157-.196	337-336	.157-.196
337-658	.098-.118	337-310	.157-.196	337-477	.196-.236	337-338	.196-.236
337-660	.118-.137	337-312	.196-.236	337-478	.236-.275	337-340	.236-.275
337-662	.137-.157	337-314	.236-.275	337-479	.275-.314	337-342	.275-.314
337-664	.157-.177	337-316	.275-.314	337-480	.314-.354	337-344	.314-.354
337-666	.177-.196	337-318	.314-.354	337-481	.354-.393	337-346	.354-.393
337-668	.196-.216	337-320	.354-.393	337-482	.393-.433	337-348	.393-.433
337-670	.216-.236			337-483	.433-.472	337-350	.433-.472
337-672	.236-.255			337-484	.472-.511	337-352	.472-.511
337-674	.255-.275					337-354	.511-.551
						337-356	.551-.590
						337-358	.590-.629

ER32 / 18 Pieces		ER40 / 23 Pieces		ER50 / 12 Pieces	
Code No.	Size	Code No.	Size	Code No.	Size
337-384		337-386		337-387	
337-361	.078-.118	337-501	.118-.157	337-450	.394-.472
337-362	.118-.157	337-502	.157-.196	337-452	.472-.551
337-363	.157-.196	337-503	.196-.236	337-454	.551-.630
337-364	.196-.236	337-505	.236-.275	337-456	.630-.709
337-365	.236-.275	337-506	.275-.314	337-458	.709-.789
337-366	.275-.314	337-507	.314-.354	337-460	.789-.866
337-367	.314-.354	337-509	.354-.393	337-461	.866-.945
337-368	.354-.393	337-510	.393-.433	337-462	.945-1.024
337-369	.393-.433	337-511	.433-.472	337-464	1.024-1.102
337-370	.433-.472	337-513	.472-.511	337-466	1.102-1.181
337-371	.472-.511	337-514	.511-.551	337-468	1.181-1.260
337-372	.511-.551	337-515	.551-.590	337-470	1.260-1.390
337-373	.551-.590	337-517	.590-.629		
337-374	.590-.629	337-518	.629-.669		
337-375	.629-.669	337-519	.669-.708		
337-376	.669-.708	337-521	.708-.748		
337-377	.708-.748	337-522	.748-.787		
337-378	.748-.787	337-523	.787-.826		
		337-524	.826-.866		
		337-525	.866-.905		
		337-526	.905-.944		
		337-527	.944-.984		
		337-528	.984-1.023		

ER Inch Collet Sets



* Case may not be as shown



ER11 / 7 Pieces		ER16 / 11 Pieces		ER20 / 15 Pieces		ER25 / 17 Pieces		ER32 / 21 Pieces		ER40 / 29 Pieces	
Code No. 337-401		Code No. 337-403		Code No. 337-404		Code No. 337-405		Code No. 337-407		Code No. 337-409	
Code No.	Size	Code No.	Size	Code No.	Size	Code No.	Size	Code No.	Size	Code No.	Size
337-610	1/16	337-531	1/16	337-621	1/16	337-683	1/8	337-703	1/8	337-728	1/8
337-613	3/32	337-532	3/32	337-623	3/32	337-684	5/32	337-704	5/32	337-729	5/32
337-615	1/8	337-533	1/8	337-663	1/8	337-685	3/16	337-706	3/16	337-731	3/16
337-618	5/32	337-534	5/32	337-665	5/32	337-686	7/32	337-707	7/32	337-732	7/32
337-651	3/16	337-535	3/16	337-667	3/16	337-687	1/4	337-708	1/4	337-733	1/4
337-655	7/32	337-536	7/32	337-669	7/32	337-688	9/32	337-709	9/32	337-734	9/32
337-659	1/4	337-537	1/4	337-671	1/4	337-689	5/16	337-711	5/16	337-736	5/16
		337-538	9/32	337-673	9/32	337-691	11/32	337-712	11/32	337-737	11/32
		337-540	5/16	337-675	5/16	337-692	3/8	337-713	3/8	337-738	3/8
		337-541	11/32	337-676	11/32	337-693	13/32	337-714	13/32	337-739	13/32
		337-542	3/8	337-677	3/8	337-694	7/16	337-716	7/16	337-741	7/16
				337-678	13/32	337-696	15/32	337-717	15/32	337-742	15/32
				337-679	7/16	337-697	1/2	337-718	1/2	337-743	1/2
				337-681	15/32	337-698	17/32	337-719	17/32	337-744	17/32
				337-682	1/2	337-699	9/16	337-721	9/16	337-746	9/16
						337-701	19/32	337-722	19/32	337-747	19/32
						337-702	5/8	337-723	5/8	337-748	5/8
								337-724	21/32	337-749	21/32
								337-725	11/16	337-751	11/16
								337-726	23/32	337-752	23/32
								337-727	3/4	337-753	3/4
										337-754	25/32
										337-756	13/16
										337-757	27/32
										337-758	7/8
										337-759	29/32
										337-761	15/16
										337-762	31/32
										337-763	1

ER Sealed Collet Sets

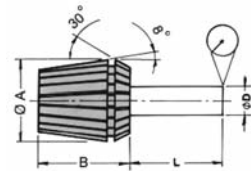
- Steel Sealed (ER11 Rubber sealed) for coolant through applications
- Pressure resistance tested to 1000 psi



Collet	Description	Range	Code No.
ER11	Inch 6pc Sealed Collet Set	3/16-17/64 x 32nds	337-929
ER11	Metric 7pc Sealer Collet Set	3.9-7.0mm x 0.5mm	337-930
ER16	Inch 11pc Sealed Collet Set	3/32-13/32 x 32nds	337-931
ER16	Metric 13pc Sealer Collet Set	4.0-10.0mm x 0.5mm	337-932
ER20	Inch 12pc Sealed Collet Set	5/32-1/2 x 32nds	337-933
ER20	Metric 17pc Sealer Collet Set	5.0-13.0mm x 0.5mm	337-935
ER25	Inch 13pc Sealed Collet Set	1/4-5/8 x 32nds	337-938
ER25	Metric 21pc Sealer Collet Set	6.0-16.0mm x 0.5mm	337-939
ER32	Inch 17pc Sealed Collet Set	1/4-3/4 x 32nds	337-940
ER32	Metric 21pc Sealer Collet Set	10.0-20.0mm x 0.5mm	337-942
ER40	Metric 33pc Sealed Collet Set	10.0-26.0mm x 0.5mm	337-944

ER Spring Collet Dimensional Data

ER collet system is made of special elastic 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.



Type	A (mm)	B (mm)	L (mm)	øD (mm)	DIN 6343 Precision	GS Precision
ER-11	11.5	18			0.02	0.010
ER-16	17	27	6	1.0-1.4	0.02	0.010
ER-20	21	31	10	1.5-2.9	0.02	0.010
ER-25	26	35	16	3.0-5.9	0.02	0.010
ER-32	33	40	25	6.0-9.9	0.02	0.010
ER-40	41	46	40	10.0-17.9	0.03	0.010
ER-50	52	60	50	18.0-26.9	0.03	0.010

Mounting instructions for ER collets

- Place collet inside nut and rotate the nut to engage with the extractor spiral in collet groove
- Only then mount nut and collet together into the collet holder or machine spindle
Note: Never use a 12-11 mm collet to clamp a 12 mm diameter, but rather use a 13-12 mm collet

Replacement ER Chuck Nuts



Collet Nut for
ER32 Shorty
Collet Chuck

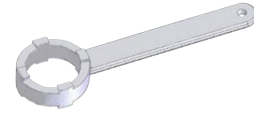
Description	Steam Oxide Code No.	Balanced & Bright Code No.
ER11 Nut (Hex)	337-680	534-790
ER16 Nut (Hex)	337-389	534-792
ER20 Nut (Hex)	337-391	534-794
ER25 Nut (Notched)	337-390	534-796
ER32 Nut (Notched)	337-392	534-798
ER40 Nut (Notched)	337-393	534-800
ER50 Nut (Notched)	337-385	
ER32 Shorty Collet Nut		
Fits ER32 Shorty Chucks (M40 x 1.5 Thread)		337-411

Replacement Backup Screws



Description	Code No.
ER11 Backup Screws	534-814
ER16 Backup Screws	534-816
ER20 Backup Screws	534-818
ER25 Backup Screws	534-820
ER32 Backup Screws	534-822
ER40 Backup Screws	534-824

ER Chuck Nut Wrenches



Wrench for
ER32 Shorty
Collet Chuck

Description	Code No.
Fits ER11 Chucks (Hex)	337-388
Fits ER16 Chucks (Hex)	337-395
Fits ER20 Chucks (Hex)	337-397
Fits ER25 Chucks (Notched)	337-396
Fits ER32 Chucks (Notched)	337-398
Fits ER40 Chucks (Notched)	337-399
ER32 Shorty Chuck Wrench	
Fits ER32 Shorty Chucks	337-381

CAT Taper SA High Precision Collet Chucks

FEATURES:

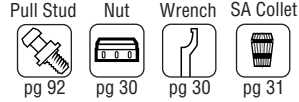
- DIN Coolant thru the flange at no extra charge
- Run out accuracy is $> .0001"$ at 4xD of the cutting tool shank
- 8° tapered collet seats deeper in the body of the holder providing increased rigidity. This results in concentricity and stronger gripping power.
- Each chuck comes with a collet extractor
- Wrench not included



Complete with certificate

CAT 40
Premium
Balanced
20x
RPM

CAT 50
Premium
Balanced
15x
RPM



Taper	Collet Series	Collet Range	Gauge Length	Code No.
CAT40				
CT40	SA6*	.028-.236"	3.54"	531-752
CT40	SA6*	.028-.236"	4.72"	531-754
CT40	SA10*	.069-.394"	3.54"	531-756
CT40	SA10*	.069-.394"	4.72"	531-758
CT40	SA10*	.069-.394"	5.91"	531-760
CT40	SA16	.108-.630"	3.54"	531-762
CT40	SA16	.108-.630"	4.72"	531-764
CT40	SA16	.108-.630"	5.91"	531-766
CT40	SA25	.630-1.00"	3.54"	531-768
CT40	SA25	.630-1.00"	4.72"	531-770
CAT50				
CT50	SA6*	.028-.236"	4.13"	531-772
CT50	SA6*	.028-.236"	6.5"	531-774
CT50	SA10*	.069-.394"	4.13"	531-776
CT50	SA10*	.069-.394"	5.31"	531-778
CT50	SA10*	.069-.394"	6.5"	531-780
CT50	SA16	.108-.630"	4.13"	531-782
CT50	SA16	.108-.630"	5.31"	531-784
CT50	SA16	.108-.630"	6.5"	531-786
CT50	SA25	.630-1.00"	4.13"	531-788
CT50	SA25	.630-1.00"	5.31"	531-790
CT50	SA25	.630-1.00"	6.5"	531-792

*Hex Nut

Replacement SA Collet Nut



Description	Code No.
SA6 Nut (Hex)	536-586
SA10 Nut (Hex)	536-588
SA16 Nut (Notched)	536-590
SA25 Nut (Notched)	536-592

BT Taper SA High Precision Collet Chucks

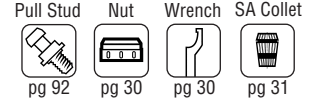
FEATURES:

- DIN Coolant thru the flange at no extra charge
- Run out accuracy is $.0001"$ at 4xD of the cutting tool shank
- 8° tapered collet seats deeper in the body of the holder providing increased rigidity. This results in concentricity and stronger gripping power.
- Each chuck comes with a collet extractor
- Wrench not included



Complete with certificate

BT 30/40
Premium
Balanced
20x
RPM



Taper	Collet Series	Collet Range	Gauge Length	Code No.
BT30				
BT30	SA6*	.028-.236"	60mm	532-500
BT30	SA6*	.028-.236"	90mm	532-502
BT30	SA10*	.069-.394"	45mm	532-504
BT30	SA10*	.069-.394"	60mm	532-506
BT30	SA10*	.069-.394"	90mm	532-508
BT30	SA16	.108-.630"	60mm	532-510
BT30	SA16	.108-.630"	90mm	532-512
BT30	SA25	.630-1.00"	90mm	532-514
BT40				
BT40	SA6*	.028-.236"	90mm	532-516
BT40	SA6*	.028-.236"	120mm	532-518
BT40	SA10*	.069-.394"	90mm	532-520
BT40	SA10*	.069-.394"	120mm	532-522
BT40	SA10*	.069-.394"	150mm	532-524
BT40	SA16	.108-.630"	90mm	532-526
BT40	SA16	.108-.630"	120mm	532-528
BT40	SA16	.108-.630"	150mm	532-530
BT40	SA25	.630-1.00"	90mm	532-532

*Hex Nut

SA Collet Chuck Wrench



Description	Code No.
Fits SA6	536-578
Fits SA10	536-580
Fits SA16	536-582
Fits SA25	536-584

SA Collet Extractor



Description	Code No.
SA6	536-570
SA10	536-572
SA16	536-574
SA25	536-576

SA6 Collets



Size	Collapse Range (mm)	Collapse Range (in.)	Code No.
Inch			
1/8	-	-	338-528
3/16	-	-	338-530
Metric			
1.0mm	0.9-1.0	0.035-0.039	338-532
1.25mm	1.15-1.25	0.045-0.049	338-534
1.5mm	1.3-1.5	0.051-0.059	338-536
1.75mm	1.5-1.75	0.059-0.068	338-538
2.0mm	1.8-2.0	0.070-0.078	338-540
2.25mm	2.05-2.25	0.080-0.088	338-542
2.5mm	2.3-2.5	0.090-0.098	338-544
2.75mm	2.55-2.75	0.100-0.108	338-546
3.0mm	2.8-3.0	0.110-0.118	338-548
3.5mm	3.0-3.5	0.118-0.137	338-550
4.0mm	3.5-4.0	0.137-0.157	338-552
4.5mm	4.0-4.5	0.157-0.177	338-554
5.0mm	4.5-5.0	0.177-0.196	338-556
5.5mm	5.0-5.5	0.196-0.216	338-558
6.0mm	5.5-6.0	0.216-0.236	338-560

SA16 Collets



Size	Collapse Range (mm)	Collapse Range (in.)	Code No.
Inch			
1/8	-	-	338-674
3/16	-	-	338-676
1/4	-	-	338-678
5/16	-	-	338-680
3/8	-	-	338-682
7/16	-	-	338-684
1/2	-	-	338-686
9/16	-	-	338-688
5/8	-	-	338-690
Metric			
2.0mm			338-614
2.5mm			338-616
3.0mm	2.75-3.0	0.108-0.118	338-618
3.5mm	3.0-3.5	0.118-0.137	338-620
4.0mm	3.5-4.0	0.137-0.157	338-622
4.5mm	4.0-4.5	0.157-0.177	338-624
5.0mm	4.5-5.0	0.177-0.196	338-626
5.5mm	5.0-5.5	0.196-0.216	338-628
6.0mm	5.5-6.0	0.216-0.236	338-630
6.5mm	6.0-6.5	0.236-0.255	338-632
7.0mm	6.5-7.0	0.255-0.275	338-634
7.5mm	7.0-7.5	0.275-0.295	338-636
8.0mm	7.5-8.0	0.295-0.314	338-638
8.5mm	8.0-8.5	0.314-0.334	338-640
9.0mm	8.5-9.0	0.334-0.354	338-642
9.5mm	9.0-9.5	0.354-0.374	338-644
10.0mm	9.5-10.0	0.374-0.393	338-646
10.5mm	10.0-10.5	0.393-0.413	338-648
11.0mm	10.5-11.0	0.413-0.433	338-650
11.5mm	11.0-11.5	0.433-0.452	338-652
12.0mm	11.5-12.0	0.452-0.472	338-654
12.5mm	12.0-12.5	0.472-0.492	338-656
13.0mm	12.5-13.0	0.492-0.511	338-658
13.5mm	13.0-13.5	0.511-0.531	338-660
14.0mm	13.5-14.0	0.531-0.551	338-662
14.5mm	14.0-14.5	0.551-0.570	338-664
15.0mm	14.5-15.0	0.570-0.590	338-666
15.5mm	15.0-15.5	0.590-0.610	338-668
16.0mm	15.5-16.0	0.610-0.629	338-670

SA10 Collets



Size	Collapse Range (mm)	Collapse Range (in.)	Code No.
Inch			
1/8	-	-	338-602
3/16	-	-	338-604
1/4	-	-	338-606
5/16	-	-	338-608
3/8	-	-	338-610
Metric			
2.0mm	1.75-2.0	0.068-0.078	338-564
2.25mm	2.0-2.25	0.078-0.088	338-566
2.5mm	2.25-2.5	0.088-0.098	338-568
2.75mm	2.5-2.75	0.098-0.108	338-570
3.0mm	2.75-3.0	0.108-0.118	338-572
3.5mm	3.0-3.5	0.118-0.137	338-574
4.0mm	3.5-4.0	0.137-0.157	338-576
4.5mm	4.0-4.5	0.157-0.177	338-578
5.0mm	4.5-5.0	0.177-0.196	338-580
5.5mm	5.0-5.5	0.196-0.216	338-582
6.0mm	5.5-6.0	0.216-0.236	338-583
6.5mm	6.0-6.5	0.236-0.255	338-584
7.0mm	6.5-7.0	0.255-0.275	338-586
7.5mm	7.0-7.5	0.275-0.295	338-588
8.0mm	7.5-8.0	0.295-0.314	338-590
8.5mm	8.0-8.5	0.314-0.334	338-592
9.0mm	8.5-9.0	0.334-0.354	338-594
9.5mm	9.0-9.5	0.354-0.374	338-596
10.0mm	9.5-10.0	0.374-0.393	338-598

SA25 Collets



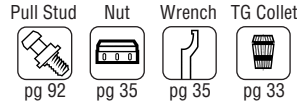
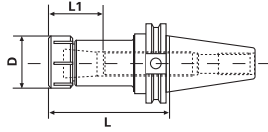
Size	Collapse Range (mm)	Collapse Range (in.)	Code No.
Inch			
1/4	-	-	338-736
5/16	-	-	338-738
3/8	-	-	338-740
7/16	-	-	338-742
1/2	-	-	338-744
5/8	-	-	338-746
3/4	-	-	338-748
Metric			
16.5mm	16.0-16.5	0.629-0.649	338-694
17.0mm	16.5-17.0	0.649-0.669	338-696
17.5mm	17.0-17.5	0.669-0.688	338-698
18.0mm	17.5-18.0	0.688-0.708	338-700
18.5mm	18.0-18.5	0.708-0.728	338-702
19.0mm	18.5-19.0	0.728-0.748	338-704
19.5mm	19.0-19.5	0.748-0.767	338-706
20.0mm	19.5-20.0	0.767-0.787	338-708
20.5mm	20.0-20.5	0.787-0.807	338-710
21.0mm	20.5-21.0	0.807-0.826	338-712
21.5mm	21.0-21.5	0.826-0.846	338-714
22.0mm	21.5-22.0	0.846-0.866	338-716
22.5mm	22.0-22.5	0.866-0.885	338-718
23.0mm	22.5-23.0	0.885-0.905	338-720
23.5mm	23.0-23.5	0.905-0.925	338-722
24.0mm	23.5-24.0	0.925-0.944	338-724
24.5mm	24.0-24.5	0.944-0.964	338-726
25.0mm	24.5-25.0	0.964-0.984	338-728
25.4mm	25.0-25.4	0.984-1.000	338-730

CAT Taper TG Collet Chucks

- DIN coolant thru the flange
- Shank traverse ground to obtain optimum accuracy
- Meets or exceeds ANSI specifications
- .0002" or better ensures the best possible cutting tool life
- Wrench not included
- Factory Balanced to save spindle life, tool life and increased productivity
- Threaded through holes for a back-up screw (tool stop) or coolant through when removed



Complete with certificate



CAT 40
Premium
Balanced
20x
RPM

CAT 50
Premium
Balanced
15x
RPM

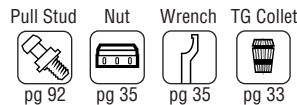
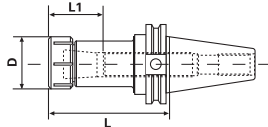
Taper	Collet Series	Collet Range	L	L1	D	Code No.
CAT40						
CT40	75TG	3/64-3/4"	3.00"	1.61"	1.89"	531-284
CT40	75TG	3/64-3/4"	5.00"	1.61"	1.89"	531-286
CT40	100TG	3/64-1"	3.00"	2.13"	2.50"	531-288
CT40	100TG	3/64-1"	3.50"	2.13"	2.50"	531-290
CT40	100TG	3/64-1"	5.50"	2.13"	2.50"	531-292
CT40	150TG	1/2-1-1/2"	6.00"	2.88"	3.50"	531-294
CAT50						
CT50	75TG	3/64-3/4"	3.50"	1.61"	1.89"	531-296
CT50	75TG	3/64-3/4"	5.50"	1.61"	1.89"	531-298
CT50	100TG	3/64-1"	3.50"	2.13"	2.50"	531-300
CT50	100TG	3/64-1"	5.50"	2.13"	2.50"	531-302
CT50	100TG	3/64-1"	7.50"	2.13"	2.50"	531-304
CT50	100TG	3/64-1"	10.00"	2.13"	3.50"	531-306
CT50	150TG	1/2-1-1/2"	3.50"	2.88"	3.50"	531-308
CT50	150TG	1/2-1-1/2"	6.00"	2.88"	3.50"	531-310

BT Taper TG Collet Chucks

- DIN coolant thru the flange
- Shank traverse ground to obtain optimum accuracy
- Meets or exceeds ANSI specifications
- .0002" or better ensures the best possible cutting tool life
- Wrench not included
- Factory Balanced to save spindle life, tool life and increased productivity
- Threaded through holes for a back-up screw (tool stop) or coolant through when removed



Complete with certificate

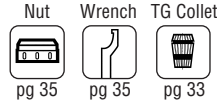
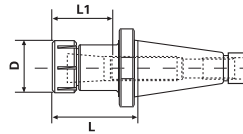


BT 30/40
Premium
Balanced
20x
RPM

BT 50
Premium
Balanced
15x
RPM

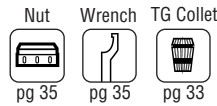
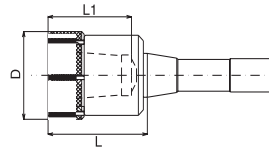
Taper	Collet Series	Collet Range	L	L1	D	Code No.
BT30						
BT30	75TG	3/64-3/4"	2.50"	1.61"	1.89"	532-128
BT30	100TG	3/64-1"	3.94"	2.24"	2.50"	532-130
BT40						
BT40	75TG	3/64-3/4"	3.00"	1.61"	1.89"	532-132
BT40	100TG	3/64-1"	3.50"	2.13"	2.50"	532-134
BT40	100TG	3/64-1"	5.50"	2.13"	2.50"	532-136
BT40	150TG	1/2-1-1/2"	5.50"	2.87"	3.50"	532-138
BT50						
BT50	100TG	3/64-1"	4.00"	2.13"	2.50"	532-139
BT50	100TG	3/64-1"	6.00"	2.13"	2.50"	532-140
BT50	150TG	1/2-1-1/2"	4.00"	2.87"	2.87"	532-141

NMTB Taper TG Collet Chucks



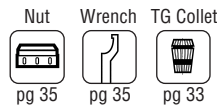
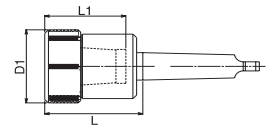
Taper	Collet Series	Collet Range	L	L1	D	Code No.
NMTB40	75TG	3/64-3/4"	2.50"	1.61"	1.89"	534-302
NMTB40	100TG	3/64-1"	3.00"	2.12"	2.50"	534-304
NMTB40	150TG	1/2-1-1/2"	5.00"	2.87"	3.50"	534-306
NMTB50	75TG	3/64-3/4"	3.00"	1.61"	1.89"	534-308
NMTB50	100TG	3/64-1"	3.50"	2.12"	2.50"	534-310
NMTB50	150TG	1/2-1-1/2"	5.00"	2.87"	3.50"	534-312

R8 Taper TG Collet Chuck



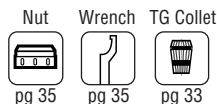
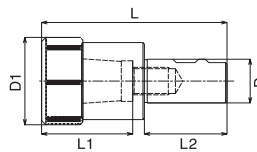
Taper	Collet Series	Collet Range	L	L1	D	Code No.
R8	100TG	3/64-1"	3.25"	2.17"	2.50"	534-314

Morse Taper TG Collet Chucks



Taper	Collet Series	Collet Range	L	L1	D	Code No.
MT3	100TG	3/64-1"	3.25"	2.73"	2.50"	534-322
MT4	100TG	3/64-1"	3.25"	2.73"	2.50"	534-324

Straight Shank TG Collet Chucks



Shank Dia.	Collet Series	Collet Range	L	L1	L2	D1	Code No.
1"	75TG	3/64-3/4"	7.50"	2.08"	5.00"	1.89"	534-316
1-1/4"	100TG	3/64-1"	5.33"	2.73"	2.28"	2.50"	534-318
1-1/2"	100TG	3/64-1"	9.00"	2.73"	6.00"	2.50"	534-320

TG 75 Standard & Sealed Collets

- 1/64" collapse per collet
- 0.0005" in T.I.R. precision per DIN 6341
- 80 FT/LBS maximum tightening torque



Regular

Sealed

Sealed Collets

- Sealed for coolant-through applications
- Pressure resistance tested to 1000 psi
- Sealed with rubber

Size (in.)	Regular Code No.	Sealed Code No.
3/64	334-790	
1/16	334-791	
5/64	334-792	
3/32	334-800	
7/64	334-801	
1/8	334-802	334-843
9/64	334-803	334-844
5/32	334-804	334-845
11/64	334-805	334-846
3/16	334-806	334-847
13/64	334-807	334-848
7/32	334-808	334-849
15/64	334-809	334-850
1/4	334-810	334-851
17/64	334-811	334-852
9/32	334-812	334-853
19/64	334-813	334-854
5/16	334-814	334-855
21/64	334-815	334-856
11/32	334-816	334-857
23/64	334-817	334-858
3/8	334-818	334-859
25/64	334-819	334-860
13/32	334-820	334-861
27/64	334-821	334-862
7/16	334-822	334-863
29/64	334-823	334-864
15/32	334-824	334-865
31/64	334-825	334-866
1/2	334-826	334-867
33/64	334-827	334-868
17/32	334-828	334-869
35/64	334-829	334-870
9/16	334-830	334-871
37/64	334-831	334-872
19/32	334-832	334-873
39/64	334-833	334-874
5/8	334-834	334-875
41/64	334-835	334-876
21/32	334-836	334-877
43/64	334-837	334-878
11/16	334-838	334-879
45/64	334-839	334-880
23/32	334-840	334-881
47/64	334-841	334-882
3/4	334-842	334-883

• See page 35 for Dimensional Data

TG 75 Tapping Collets

- For synchronous, rigid tapping operations using TG collet chuck
- Collet bore is exact tool diameter with square drive for accuracy and rigidity



ANSI Tap Inch	ANSI Tap Metric	Shank Dia.	Size of Square	Code No.
0-6	M1.6-M3.5	.141"	.110"	334-884
8	M4	.168"	.131"	334-885
10	M4.5, M5	.194"	.152"	334-886
12		.220"	.165"	334-887
1/4	M6, M6.3	.255"	.191"	334-888
5/16	M7, M8	.318"	.238"	334-889
3/8	M10	.381"	.286"	334-890
7/16		.323"	.242"	334-891
1/2	M12, M12.5	.367"	.275"	334-892
9/16	M14	.429"	.322"	334-893
5/8	M16	.480"	.360"	334-894
11/16	M18	.542"	.406"	334-895
3/4		.590"	.442"	334-896
NPT				
1/16, 1/8 NPT-ssu*		.3125"	.234"	334-897
1/8 NPT-LO*		.4375"	.328"	334-898
1/4 NPT		.5625"	.421"	334-899

*ssu = small shank

*LO = large shank

Standard TG 75 Collet Sets



No. of Pieces	Range (in.)	Increment (in.)	Code No.
43	3/32-3/4	1/64	334-900
41	1/8-3/4	1/64	334-901
33	1/4-3/4	1/64	334-902
25	3/8-3/4	1/64	334-903
22	3/32-3/4	1/32	334-904
13	3/8-3/4	1/32	334-905
11	1/8-3/4	1/16	334-906

TG 100 Standard & Sealed Collets

- 1/64" collapse per collet
- 0.0005" in T.I.R. precision per DIN 6341
- 90 FT/LBS maximum tightening torque

Sealed Collets

- Sealed for coolant-through applications
- Pressure resistance tested to 1000 psi
- Sealed with rubber



Regular

Sealed

Size (in.)	Regular Code No.	Sealed Code No.
3/64	334-418	
1/16	334-419	
5/64	334-423	
3/32	334-425N	
7/64	334-426	
1/8	334-427N	
9/64	334-428	
5/32	334-429N	334-907
11/64	334-430	334-908
3/16	334-431N	334-909
13/64	334-432	334-910
7/32	334-433N	334-911
15/64	334-434	334-912
1/4	334-435N	334-913
17/64	334-436	334-914
9/32	334-437N	334-915
19/64	334-438	334-916
5/16	334-439N	334-917
21/64	334-440	334-918
11/32	334-441N	334-919
23/64	334-442	334-920
3/8	334-443N	334-921
25/64	334-444	334-922
13/32	334-445N	334-923
27/64	334-446	334-924
7/16	334-447N	334-925
29/64	334-448	334-926
15/32	334-449N	334-927
31/64	334-450	334-928
1/2	334-451N	334-929
33/64	334-452	334-930
17/32	334-453N	334-931
35/64	334-454	334-932
9/16	334-455N	334-933
37/64	334-456	334-934
19/32	334-457N	334-935
39/64	334-458	334-936
5/8	334-459N	334-937
41/64	334-460	334-938
21/32	334-461N	334-939
43/64	334-462	334-940
11/16	334-463N	334-941
45/64	334-464	334-942
23/32	334-465N	334-943
47/64	334-466	334-944
3/4	334-467N	334-945
49/64	334-468	334-946
25/32	334-469N	334-947
51/64	334-470	334-948
13/16	334-471N	334-949
53/64	334-472	334-950
27/32	334-473N	334-951
55/64	334-474	334-952
7/8	334-475N	334-953
57/64	334-476	334-954
29/32	334-477N	334-955
59/64	334-478	334-956
15/16	334-479N	334-957
61/64	334-480	334-958
31/32	334-481N	334-959
63/64	334-482	334-960
1	334-483N	334-961

TG 100 Tapping Collets

- For synchronous, rigid tapping operations using TG collet chuck
- Collet bore is exact tool diameter with square drive for accuracy and rigidity



ANSI Tap Inch	ANSI Tap Metric	Shank Dia.	Size of Square	Code No.
0-6	M1.6-M3.5	.141"	.110"	334-963
8	M4	.168"	.131"	334-964
10	M4.5, M5	.194"	.152"	334-965
12		.220"	.165"	334-966
1/4	M6, M6.3	.255"	.191"	334-967
5/16	M7, M8	.318"	.238"	334-968
3/8	M10	.381"	.286"	334-969
7/16		.323"	.242"	334-970
1/2	M12, M12.5	.367"	.275"	334-971
9/16	M14	.429"	.322"	334-972
5/8	M16	.480"	.360"	334-973
11/16	M18	.542"	.406"	334-974
3/4		.590"	.442"	334-975
13/16	M20	.652"	.489"	334-976
7/8	M22	.697"	.523"	334-977
15/16	M24	.760"	.570"	334-978
1	M25	.800"	.600"	334-979
NPT				
1/16, 1/8 NPT-ssu*		.3125"	.234"	334-980
1/8 NPT-LS*		.4375"	.328"	334-981
1/4 NPT		.5625"	.421"	334-982
3/8 NPT		.7000"	.531"	334-983
1/2 NPT		.6875"	.515"	334-984

*ssu = small shank

*LS = large shank

Standard TG 100 Collet Sets



No. of Pieces	Range (in.)	Increment (in.)	Code No.
59	3/32-1	1/64	334-575
41	3/8-1	1/64	334-570
30	3/32-1	1/32	334-565
21	3/8-1	1/32	334-560
15	1/8-1	1/16	334-561

• See page 35 for Dimensional Data

TG 150 Standard Collets

- Unique 8° taper design affords highest gripping power
- True double angle, for extreme concentricity
- 16 jaws giving powerful gripping and parallel clamping
- A unique self releasing system is built into the collet and clamping nut to eliminate cutting tools sticking in collets
- 1/64" collapse per collet
- 0.0005" in TIR precision per DIN 6341



Size (in.)	Code No.
1/2	334-485N
33/64	334-486
17/32	334-487N
35/64	334-488
9/16	334-489N
37/64	334-490
19/32	334-491N
39/64	334-492
5/8	334-493N
41/64	334-494
21/32	334-495N
43/64	334-496
11/16	334-497N
45/64	334-498
23/32	334-499N
47/64	334-500
3/4	334-501N
49/64	334-502
25/32	334-503N
51/64	334-504
13/16	334-505N
53/64	334-506
27/32	334-507N
55/64	334-508
7/8	334-509N
57/64	334-510
29/32	334-511N
59/64	334-512
15/16	334-513N
61/64	334-514
31/32	334-515N
63/64	334-516
1	334-517N
1-1/64	334-518
1-1/32	334-519N
1-3/64	334-520
1-1/16	334-521N
1-5/64	334-522
1-3/32	334-523N
1-7/64	334-524
1-1/8	334-525N
1-9/64	334-526
1-5/32	334-527N
1-11/64	334-528
1-3/16	334-529N
1-13/64	334-530
1-7/32	334-531N
1-15/64	334-532
1-1/4	334-533N
1-17/64	334-534
1-9/32	334-535N
1-19/64	334-536
1-5/16	334-537N
1-21/64	334-538
1-11/32	334-539N
1-23/64	334-540
1-3/8	334-541N
1-25/64	334-542
1-13/32	334-543N
1-27/64	334-544
1-7/16	334-545N
1-29/64	334-546
1-15/32	334-547N
1-31/64	334-548
1-1/2	334-549N

Standard TG 150 Collet Sets



No. of Pieces	Range (in.)	Increment (in.)	Code No.
17	1/2-1-1/2	1/16	334-580
33	1/2-1-1/2	1/32	334-585

Replacement TG Chuck Nuts



Description	Code No.
*75TG Nut	534-760
*100TG Nut	534-762
*150TG Nut	534-764
75TG Nut, Solid	534-830
100TG Nut, Solid	534-832
150TG Nut, Solid	534-834

* Photo Shown / This style is supplied with chuck

TG Chuck Wrenches



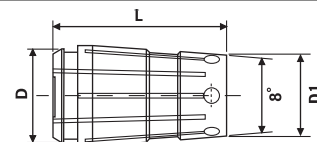
Description	Code No.
Fits 75TG Chuck	534-772
Fits 100TG Chuck	534-774
Fits 150TG Chuck	534-776

Replacement TG Backup Screws



Description	Code No.
75TG	534-778
75TG Coolant	534-780
100TG	534-782
100TG Coolant	534-784
150TG	534-786
150TG Coolant	534-788

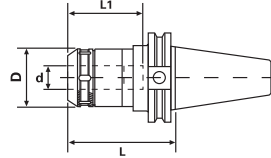
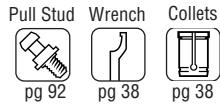
TG Collet Dimensional Data



Style	D	D1	L	Collet Range
25TG	0.425"	0.325"	0.709"	3/64-1/4"
50TG	0.760"	0.594"	1.437"	1/8-1/2"
75TG	1.063"	0.871"	1.844"	3/64-3/4"
100TG	1.278"	1.121"	2.386"	3/64-1"
150TG	1.875"	1.678"	3.000"	1/2-1-1/2"

CAT 40 Taper Milling Chucks

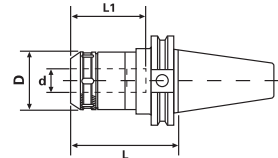
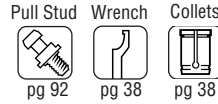
- DIN coolant thru the flange at no extra charge
- Rough milling or 'hogging' operations
- Improved tool life over regular end mill holders
- '360°' gripping contact
- Extreme rigidity over taper collets
- 0.0002" TIR for maximum tool life and accuracy



Taper	Collet Series	Collet Range	d	L	L1	D	Code No.
CT40	GS 3/4"	.125-.750"	.750"	3.54"	3.15"	2.05"	531-253
CT40	GS 3/4"	.125-.750"	.750"	4.14"	3.15"	2.05"	531-250
CT40	GS 3/4"	.125-.750"	.750"	4.73"	3.15"	2.05"	531-252
CT40	GS 1"	.125-1.00"	1.00"	3.54"	3.15"	2.41"	531-255
CT40	GS 1"	.125-1.00"	1.00"	4.14"	3.15"	2.41"	531-254
CT40	GS 1-1/4"	.187-1.25"	1.25"	3.54"	3.34"	2.88"	531-257
CT40	GS 1-1/4"	.187-1.25"	1.25"	4.14"	3.34"	2.88"	531-256
CT40	GS 1-1/4"	.187-1.25"	1.25"	5.32"	4.73"	2.88"	531-258

CAT 50 Taper Milling Chucks

- 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



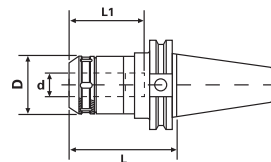
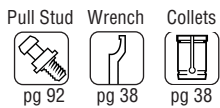
Taper	Collet Series	Collet Range	d	L	L1	D	Code No.
CT50	GS 3/4"	.125-.750"	.750"	4.14"	3.15"	2.05"	531-260
CT50	GS 3/4"	.125-.750"	.750"	5.32"	3.15"	2.05"	531-262
CT50	GS 3/4"	.125-.750"	.750"	6.49"	3.15"	2.05"	531-263
CT50	GS 1"	.125-1.00"	1.00"	4.14"	3.15"	2.41"	531-264
CT50	GS 1-1/4"	.187-1.25"	1.25"	3.54"	4.73"	2.88"	531-265
CT50	GS 1-1/4"	.187-1.25"	1.25"	4.14"	4.73"	2.88"	531-266
CT50	GS 1-1/4"	.187-1.25"	1.25"	5.32"	4.73"	2.88"	531-268
CT50	GS 1-1/4"	.187-1.25"	1.25"	6.49"	4.73"	2.88"	531-269

CAT 40 Taper 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



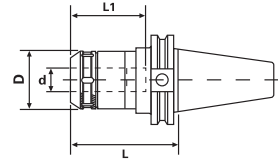
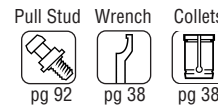
Taper	Collet Series	Collet Range	d	L	L1	D	Code No.
CT40	GS 3/4"	.125-.750"	.750"	3.54"	3.15"	2.05"	521-253
CT40	GS 1"	.125-1.00"	1.00"	3.54"	3.15"	2.41"	521-255
CT40	GS 1-1/4"	.187-1.25"	1.25"	3.54"	3.34"	2.88"	521-257

CAT 50 Taper DUAL CONTACT Milling Chucks

New

FOR DUAL CONTACT SPINDLES

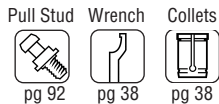
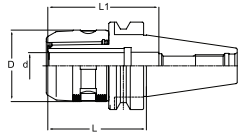
- Improves rigidity and reduces vibration allowing for increased feed rates and increased tool life.
- DIN coolant thru the flange at no extra charge
- Rough milling or 'hogging' operations
- Improved tool life over regular end mill holders
- '360°' gripping contact
- Extreme rigidity over taper collets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



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

BT 30 Taper Milling Chucks

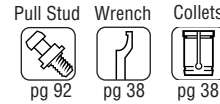
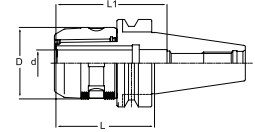
- DIN coolant thru the flange at no extra charge
- Rough milling or 'hogging' operations
- Improved tool life over regular end mill holders
- '360°' gripping contact
- Extreme rigidity over taper collets
- 0.0002" TIR for maximum tool life and accuracy



Taper	Collet Series	Collet Range	d	L	L1	D	Code No.
BT30	GS 3/4"	.125-.750"	.750"	3.55"	3.15"	2.05"	532-096

BT 50 Taper Milling Chucks

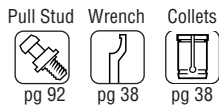
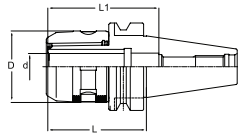
- DIN coolant thru the flange at no extra charge
- Rough milling or 'hogging' operations
- Improved tool life over regular end mill holders
- '360°' gripping contact
- Extreme rigidity over taper collets
- 0.0002" TIR for maximum tool life and accuracy



Taper	Collet Series	Collet Range	d	L	L1	D	Code No.
BT50	GS 3/4"	.125-.750"	.750"	3.60"	3.15"	2.05"	532-109
BT50	GS 1-1/4"	.187-1.25"	1.25"	4.20"	3.34"	2.88"	532-113

BT 40 Taper Milling Chucks

- 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

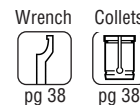
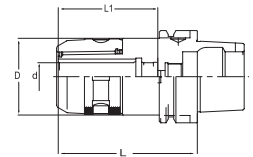


Taper	Collet Series	Collet Range	d	L	L1	D	Code No.
BT40	GS 3/4"	.125-.750"	.750"	4.14"	3.15"	2.05"	532-098
BT40	GS 3/4"	.125-.750"	.750"	4.73"	3.15"	2.05"	532-100
BT40	GS 1"	.125-1.00"	1.00"	2.75"	3.15"	2.41"	532-123
BT40	GS 1"	.125-1.00"	1.00"	4.14"	3.15"	2.41"	532-102
BT40	GS 1-1/4"	.187-1.25"	1.25"	4.14"	3.34"	2.88"	532-104
BT40	GS 1-1/4"	.187-1.25"	1.25"	5.32"	4.73"	2.88"	532-106

HSK Milling Chucks

HSK Advantages:

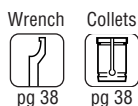
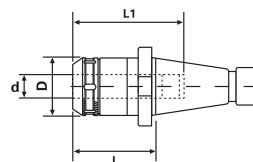
- High rigidity and torque transmission (almost double the rigidity of V-flange holders)
- Extreme concentricity enhances tool life performance
- Coolant thru capabilities



Taper	Collet Series	Collet Range	d	L	L1	D	Code No.
HSK63A							
HSK63A	GS3/4	0.125-0.750"	0.750"	3.740"	2.480"	2.047"	536-154
HSK63A	GS3/4	0.125-0.750"	0.750"	4.331"	3.150"	2.047"	536-156
HSK63A	GS1	0.125-1.000"	1.000"	3.937"	2.972"	2.362"	536-158
HSK63A	GS1	0.125-1.000"	1.000"	5.118"	3.150"	2.362"	536-160
HSK63A	GS1-1/4	0.187-1.250"	1.250"	4.331"	3.268"	2.717"	536-162
HSK63A	GS1-1/4	0.187-1.250"	1.250"	5.118"	3.189"	2.717"	536-164
HSK63A	GS32	3mm - 32mm	32mm	5.118"	4.055"	2.717"	536-166
HSK100A							
HSK100A	GS3/4	0.125-0.750"	0.750"	4.528"	3.150"	2.047"	536-168
HSK100A	GS3/4	0.125-0.750"	0.750"	5.315"	3.150"	2.047"	536-170
HSK100A	GS1	0.125-1.000"	1.000"	4.528"	3.150"	2.362"	536-172
HSK100A	GS1	0.125-1.000"	1.000"	5.315"	3.150"	2.362"	536-174
HSK100A	GS1-1/4	0.187-1.250"	1.250"	4.528"	3.268"	2.717"	536-176
HSK100A	GS1-1/4	0.187-1.250"	1.250"	6.496"	3.189"	2.717"	536-178
HSK100A	GS32	3mm - 32mm	32mm	5.315"	4.055"	2.717"	536-180
HSK100A	GS2	1.000-2.000"	2.000"	4.921"	3.543"	4.134"	536-182

NMTB Taper Milling Chucks

- Shank traverse ground to obtain optimum accuracy
- Meets or exceeds ANSI specifications
- .0002" or better TIR ensures the best possible cutting tool life



Taper	Collet Series	Collet Range	d	L	L1	D	Code No.
NMTB40	GS 3/4"	.125-.750"	.750"	3.55"	3.15"	2.05"	534-200
NMTB40	GS 1-1/4"	.187-1.25"	1.25"	3.55"	3.00"	2.88"	534-202
NMTB50	GS 3/4"	.125-.750"	.750"	4.14"	3.15"	2.05"	534-204
NMTB50	GS 1-1/4"	.187-1.25"	1.25"	3.35"	4.72"	2.88"	534-206

GS Milling Collets



I.D.	GS 3/4" Code No.	GS 1" Code No.	GS 1-1/4" Code No.
Inch			
1/8"	534-650	534-682	
3/16"	331-469N	534-684	331-481N
1/4"	331-470N	534-686	331-482N
5/16"	331-472N	534-688	331-484N
3/8"	331-474N	534-690	331-486N
7/16"	534-660	534-692	534-726
1/2"	331-476N	534-694	331-488N
9/16"	331-477N		331-489N
5/8"	331-478N	534-696	331-490N
3/4"		534-698	331-492N
7/8"		534-700	331-494N
1"			331-496N
Metric			
6mm	534-668	534-702	534-740
7mm	534-670		
8mm	534-672	534-704	534-742
10mm	534-674	534-706	534-744
12mm	534-676	534-708	534-746
14mm	534-678	534-710	534-748
16mm	534-680	534-712	534-750
18mm		534-714	
20mm		534-716	534-752
25mm			534-754

Milling Chuck Wrenches

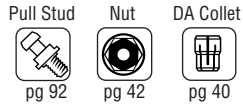


Chuck Cap.	Code No.
3/4"	534-208
1"	534-210
1-1/4"	534-212

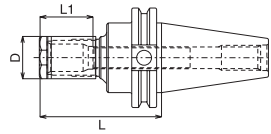
CAT 40 Taper DA Collet Chucks

- DIN coolant thru the flange
- All Ground Body
- 100% Forged Construction

CAT 40
Premium
Balanced
20x
RPM



Complete with certificate

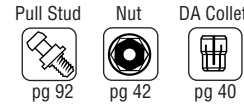


Taper	Collet Series	Collet Range	L	L1	D	Code No.
CT40	DA100	3/64-9/16"	3.50"	1.15"	1.06"	531-270
CT40	DA100	3/64-9/16"	6.00"	1.15"	1.06"	531-272
CT40	DA180	3/64-3/4"	4.00"	1.50"	1.44"	531-273
CT40	DA180	3/64-3/4"	6.00"	1.50"	1.44"	531-274
CT40	DA200	3/64-3/8"	3.00"	1.03"	0.86"	531-275
CT40	DA300	3/64-1/4"	3.00"	0.84"	0.55"	531-276

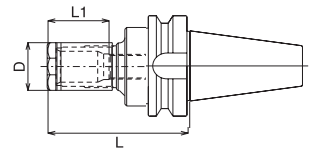
BT 30 Taper DA Collet Chucks

- All Ground Body
- 100% Forged Construction

BT 30
Premium
Balanced
20x
RPM



Complete with certificate

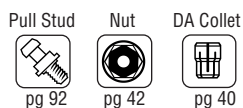


Taper	Collet Series	Collet Range	L	L1	D	Code No.
BT30	DA100	3/64-9/16"	3.00"	1.15"	1.06"	532-108
BT30	DA180	3/64-3/4"	3.00"	1.51"	1.44"	532-110
BT30	DA200	3/64-3/8"	3.00"	1.03"	0.86"	532-112
BT30	DA300	3/64-1/4"	3.00"	1.04"	0.55"	532-125

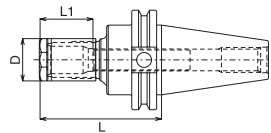
CAT 50 Taper DA Collet Chucks

- DIN coolant thru the flange
- All Ground Body
- 100% Forged Construction

CAT 50
Premium
Balanced
15x
RPM



Complete with certificate

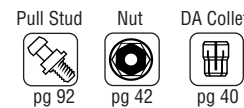


Taper	Collet Series	Collet Range	L	L1	D	Code No.
CT50	DA180	3/64-3/4"	4.00"	1.50"	1.44"	531-278
CT50	DA180	3/64-3/4"	6.00"	1.50"	1.44"	531-280

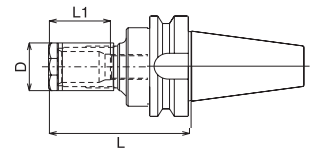
BT 40 Taper DA Collet Chucks

- BT 40 DIN coolant thru the flange
- All Ground Body
- 100% Forged Construction

BT 40
Premium
Balanced
20x
RPM

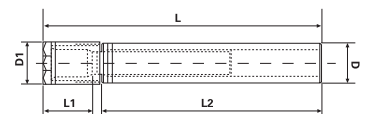
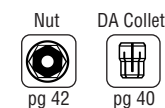


Complete with certificate



Taper	Collet Series	Collet Range	L	L1	D	Code No.
BT40	DA100	3/64-9/16"	3.50"	1.15"	1.06"	532-116
BT40	DA100	3/64-9/16"	6.00"	1.15"	1.06"	532-118
BT40	DA180	3/64-3/4"	4.00"	1.51"	1.44"	532-120
BT40	DA180	3/64-3/4"	6.00"	1.51"	1.44"	532-122
BT40	DA200	3/64-3/8"	3.00"	1.03"	0.86"	532-124
BT40	DA300	3/64-1/4"	3.00"	1.04"	0.55"	532-126

DA Collet Chuck Extensions



Collet Series	Collet Range	Shank Dia. (D)	O.A.L. L	L1	L2	D1	Code No.
DA100	3/64-9/16"	1"	5.00"	1.66"	3.00"	1.06"	534-220
DA100	3/64-9/16"	1"	7.50"	1.66"	5.50"	1.06"	534-222
DA180	3/64-3/4"	1-1/4"	5.00"	1.83"	3.00"	1.44"	534-224
DA180	3/64-3/4"	1-1/4"	7.50"	1.83"	5.50"	1.44"	534-226
DA200	3/64-3/8"	3/4"	4.50"	1.34"	3.00"	0.86"	534-228
DA200	3/64-3/8"	3/4"	7.00"	1.34"	5.50"	0.86"	534-230

DA 100 Collets

- Collapse - 1/32"
- .001" TIR collet accuracy
- For most drilling, reaming and tapping applications.



Fractional Inch	Decimal (in.)	Code No.
3/64	.047	331-323
1/16	.062	331-325
5/64	.078	331-327
3/32	.094	331-329
7/64	.109	331-333
1/8	.125	331-335
9/64	.141	331-337
5/32	.156	331-339
11/64	.172	331-341
3/16	.188	331-343
13/64	.203	331-345
7/32	.219	331-347
15/64	.234	331-349
1/4	.250	331-351
17/64	.266	331-353
9/32	.281	331-355
19/64	.297	331-357
5/16	.312	331-359
21/64	.328	331-503
11/32	.344	331-505
23/64	.359	331-507
3/8	.375	331-322
25/64	.391	331-509
13/32	.406	331-324
27/64	.422	331-511
7/16	.438	331-326
29/64	.453	331-513
15/32	.469	331-328
31/64	.484	331-515
1/2	.500	331-330
33/64	.516	331-517
17/32	.531	331-332
35/64	.547	331-519
9/16	.562	331-521

DA 100 Collet Sets

Collet	Pieces	Range	Code No.
DA100	8pc	1/8-9/16 x 16ths	331-356
DA100	11pc	1/4-9/16 x 32nds	331-358
DA100	15pc	1/8-9/16 x 32nds	331-362
DA100	17pc	1/16-9/16 x 32nds	331-384
DA100	21pc	1/4-9/16 x 64ths	331-385
DA100	29pc	1/8-9/16 x 64ths	331-386
DA100	33pc	1/16-9/16 x 64ths	331-387

DA 180 Collets

- Collapse - 1/32"
- .001" TIR collet accuracy
- For most drilling, reaming and tapping applications.



Fractional Inch	Decimal (in.)	Code No.
3/64	.046	331-523
1/16	.062	331-525
5/64	.078	331-527
3/32	.094	331-529
7/64	.109	331-533
1/8	.125	331-535
9/64	.141	331-537
5/32	.156	331-539
11/64	.172	331-541
3/16	.188	331-543
13/64	.203	331-545
7/32	.219	331-547
15/64	.234	331-549
1/4	.250	331-551
17/64	.266	331-553
9/32	.281	331-555
19/64	.297	331-557
5/16	.312	331-559
21/64	.328	331-561
11/32	.344	331-563
23/64	.359	331-565
3/8	.375	331-567
25/64	.391	331-569
13/32	.406	331-571
27/64	.422	331-573
7/16	.438	331-575
29/64	.453	331-577
15/32	.469	331-579
31/64	.484	331-581
1/2	.500	331-583
33/64	.516	331-585
17/32	.531	331-587
35/64	.547	331-589
9/16	.562	331-334
37/64	.578	331-595
19/32	.594	331-336
39/64	.609	331-597
5/8	.625	331-338
41/64	.641	331-601
21/32	.656	331-340
43/64	.672	331-603
11/16	.688	331-342
45/64	.703	331-605
23/32	.719	331-344
47/64	.734	331-607
3/4	.750	331-346

DA 180 Collet Sets

Collet	Pieces	Range	Code No.
DA180	9pc	1/4-3/4 x 16ths	331-388
DA180	17pc	1/4-3/4 x 32nds	331-389
DA180	21pc	1/8-3/4 x 32nds	331-390
DA180	33pc	1/4-3/4 x 64ths	331-391
DA180	41pc	1/8-3/4 x 64ths	331-392

DA 180 Collets

- Collapse - 1/32"
- .001" TIR collet accuracy
- For most drilling, reaming and tapping applications.



Fractional Inch	Decimal (in.)	Code No.
3/64	.046	331-523
1/16	.062	331-525
5/64	.078	331-527
3/32	.094	331-529
7/64	.109	331-533
1/8	.125	331-535
9/64	.141	331-537
5/32	.156	331-539
11/64	.172	331-541
3/16	.188	331-543
13/64	.203	331-545
7/32	.219	331-547
15/64	.234	331-549
1/4	.250	331-551
17/64	.266	331-553
9/32	.281	331-555
19/64	.297	331-557
5/16	.312	331-559
21/64	.328	331-561
11/32	.344	331-563
23/64	.359	331-565
3/8	.375	331-567
25/64	.391	331-569
13/32	.406	331-571
27/64	.422	331-573
7/16	.438	331-575
29/64	.453	331-577
15/32	.469	331-579
31/64	.484	331-581
1/2	.500	331-583
33/64	.516	331-585
17/32	.531	331-587
35/64	.547	331-589
9/16	.562	331-334
37/64	.578	331-595
19/32	.594	331-336
39/64	.609	331-597
5/8	.625	331-338
41/64	.641	331-601
21/32	.656	331-340
43/64	.672	331-603
11/16	.688	331-342
45/64	.703	331-605
23/32	.719	331-344
47/64	.734	331-607
3/4	.750	331-346

DA 180 Collet Sets

Collet	Pieces	Range	Code No.
DA180	9pc	1/4-3/4 x 16ths	331-388
DA180	17pc	1/4-3/4 x 32nds	331-389
DA180	21pc	1/8-3/4 x 32nds	331-390
DA180	33pc	1/4-3/4 x 64ths	331-391
DA180	41pc	1/8-3/4 x 64ths	331-392

DA 200 Collets

- Collapse - 1/32"
- .001" TIR collet accuracy
- For most drilling, reaming and tapping applications.



Fractional Inch	Decimal (in.)	Code No.
3/64	.047	331-297
1/16	.062	331-299
5/64	.078	331-301
3/32	.094	331-303
7/64	.109	331-305
1/8	.125	331-307
9/64	.141	331-309
5/32	.156	331-311
11/64	.172	331-313
3/16	.188	331-315
13/64	.203	331-302
7/32	.219	331-304
15/64	.234	331-306
1/4	.250	331-308
17/64	.266	331-310
9/32	.281	331-312
19/64	.297	331-314
5/16	.312	331-316
21/64	.328	331-318
11/32	.344	331-320
23/64	.359	331-317
3/8	.375	331-319
25/64	.391	331-321

DA 200 Collet Sets

Collet	Pieces	Range	Code No.
DA200	9pc	1/8-3/8 x 32nds	331-393
DA200	11pc	1/16-3/8 x 32nds	331-394
DA200	17pc	1/8-3/8 x 64ths	331-395
DA200	21pc	1/16-3/8 x 64ths	331-396

DA 300 Collets

- Collapse - 1/32"
- .001" TIR collet accuracy
- For most drilling, reaming and tapping applications.



Fractional Inch	Decimal (in.)	Code No.
1/32	.031	331-275
3/64	.047	331-277
1/16	.062	331-283
5/64	.078	331-285
3/32	.094	331-287
7/64	.109	331-290
1/8	.125	331-292
9/64	.141	331-294
5/32	.156	331-296
11/64	.172	331-298
3/16	.188	331-300
13/64	.203	331-289
7/32	.219	331-291
15/64	.234	331-293
1/4	.250	331-295

DA 300 Collet Sets

Collet	Pieces	Range	Code No.
DA300	7pc	1/16-1/4 x 32nds	331-397
DA300	9pc	1/8-1/4 x 64ths	331-398
DA300	13pc	1/16-1/4 x 64ths	331-399
DA300	14pc	3/64-1/4 x 64ths	331-400

Replacement DA Chuck Nuts

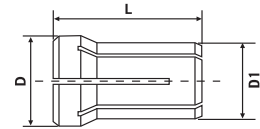


Description	Code No.
DA100, Complete Replacement	534-264
DA180 Nut, Complete Replacement	534-270
DA200 Nut, Complete Replacement	534-276
DA300 Nut, Complete Replacement	534-277

Backup Screws For DA Collet Chucks

Description	Code No.
All CAT, BT, NMTB DA100 chucks	534-284
DA100 Chuck Extensions	534-286
All CAT, BT, NMTB DA180 chucks	534-288
DA180 Chuck Extensions	534-290
All 40-taper DA200 chucks	534-292
DA200 Chuck Extensions	534-294
BT30 DA200 Chucks	534-296
CAT, BT DA300 chucks	534-297

DA Collet Dimensional Data



Collet	D	D1	L	Collet Range
100DA	0.769"	0.635"	1.441"	3/64-9/16"
180DA	1.035"	0.873"	1.637"	3/64-3/4"
200DA	0.539"	0.453"	1.193"	3/64-3/8"
300DA	0.375"	0.300"	1.000"	3/64-1/4"

Type 25 & Type 32 Collet Chuck Sets

Set includes:

1 chuck, 1 wrench, 1 each collet and fitted case



Type 25

- 1/8", 3/16", 1/4", 5/16", 3/8", 1/2", 5/8", 3/4", 7/8", 1"

Type 32

- 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 11/16", 3/4", 13/16", 7/8", 15/16", 1", 1-1/8", 1-1/4"

Chuck	Code No.
COLLET SETS CONSIST OF 15 COLLETS 1/4" - 1-1/4" (TYPE 32)	
ISA-40	334-625
ISA-50	334-630
M.T.5	334-635
COLLET SETS CONSIST OF 10 COLLETS 1/8" - 1" (TYPE 25)	
ISA-30	334-600
ISA-40	334-605
ISA-50	334-608
M.T.3	334-610
M.T.4	334-615
R-8	334-620

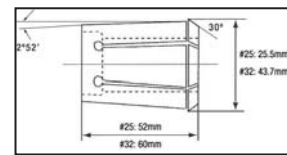
Component Parts For 1" Type 25 Sets

Description	Type 25	Code No.
Wrench	1" (Type 25)	334-650
Nuts	1" (Type 25)	334-645
Fitted Case	1" (Type 25)	334-640
Chuck ISA-30	1" (Type 25)	334-655
Chuck ISA-40	1" (Type 25)	334-660
Chuck ISA-50	1" (Type 25)	334-663
Chuck MT 3	1" (Type 25)	334-665
Chuck MT 4	1" (Type 25)	334-670
Chuck R-8	1" (Type 25)	334-675

Component Parts For 1-1/4" Type 32 Sets

Description	Type 25	Code No.
Wrench	1-1/4" (Type 32)	334-690
Nuts	1-1/4" (Type 32)	334-685
Fitted Case	1-1/4" (Type 32)	334-680
Chuck ISA-40	1-1/4" (Type 32)	334-695
Chuck ISA-50	1-1/4" (Type 32)	334-700
Chuck MT 5	1-1/4" (Type 32)	334-705

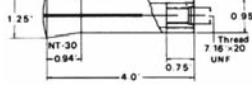
Type 25 & Type 32 Collets



Size (in.)	Type 25 Code No.	Type 32 Code No.
Inch		
1/8"	336-400	
3/16"	336-402	
1/4"	336-404	336-430
5/16"	336-406	336-432
3/8"	336-408	336-434
7/16"	336-409	336-436
1/2"	336-410	336-438
9/16"	336-411	336-440
5/8"	336-412	336-442
11/16"		336-444
3/4"	336-414	336-446
13/16"		336-448
7/8"	336-416	336-450
15/16"		336-452
1"	336-418	336-454
1-1/8"		336-456
1-1/4"		336-458
Metric		
3 mm	336-504	
4 mm	336-506	
5 mm	336-508	336-549
6 mm	336-510	336-550
7 mm	336-512	336-552
8 mm	336-514	336-554
9 mm	336-516	336-556
10 mm	336-518	336-560
11 mm	336-520	336-562
12 mm	336-522	336-564
13 mm	336-524	336-566
14 mm	336-526	336-568
15 mm	336-528	336-570
16 mm	336-530	336-572
17 mm	336-532	336-574
18 mm	336-534	336-576
19 mm	336-536	336-578
20 mm	336-538	336-580
21 mm	336-540	336-582
22 mm	336-542	336-584
23 mm	336-544	336-586
24 mm	336-546	336-588
25 mm	336-548	336-590
26 mm		336-592
28 mm		336-596
29 mm		336-597
30 mm		336-598
32 mm		336-600

R8 Collets & Set

Manufactured of hardened and ground tool steel, these collets can be recommended for their accuracy and fine finish.

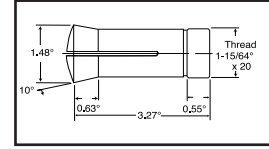


Size	GS Code No.	STM Code No.
3/32		325-160•
1/8	325-167	325-165
5/32	325-172	325-170
3/16	325-177	325-175
7/32	325-182	325-180
1/4	325-187	325-185
9/32	325-192	325-190
5/16	325-197	325-195
11/32	325-202	325-200
3/8	325-207	325-205
13/32	325-212	325-210
7/16	325-217	325-215
15/32	325-222	325-220
1/2	325-227	325-225
9/16	325-232	325-230
19/32	325-237	325-235
5/8	325-242	325-240
21/32	325-247	325-245
11/16	325-252	325-250
23/32	325-257	325-255
3/4	325-262	325-260
R8 Collet Set 1/8-3/4		325-300

• Available only while supplies last

5C Collets & Set

• Made of tool steel, hardened and ground to maintain original accuracy



Size	GS Code No.	STM Code No.
1/8	325-317	325-315
3/16	325-322	325-320
1/4	325-327	325-325
5/16	325-332	325-330
3/8	325-337	325-335
7/16	325-342	325-340
1/2	325-347	325-345
9/16	325-354	325-350
5/8	325-357	325-355
11/16	325-362	325-360
3/4	325-367	325-365
13/16	325-372	325-370
7/8	325-377	325-375
15/16	325-382	325-380
1	325-387	325-385
5C Collet Set 1/8-1"		325-310

SHRINK FIT TOOLING

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HSK100 Balanceable Shrink Fit Holders	49



GS BALANCEABLE SHRINK FIT TOOLING

Requires using a balancing machine

FEATURES AND BENEFITS

- With threaded holes in order to balance with supplied balancing screws
- Improved concentricity
- Improved balance design with no moving pieces
- Low Centrifugal Forces due to low holder mass
- For maximum gripping power with exceptional concentricity.
- Concentricity of ≤ 0.0001 " with tool shrunk in holder.
- Chip load distributed evenly along cutting edge of tool which results in longer tool life.
- Constructed of double tempered Tool Steel for exceptional durability and cycle life. With proper use, toolholder life should exceed that of standard end mill holders.
- Tool is gripped 360° along the entire length of bore resulting in an evenly distributed clamping force.
- Short projections are possible because no mechanical clamping devices are used. This results in greater rigidity and resistance to bending.
- Simple and fast to use. The total time elapsed to remove one cutting tool and insert another is less than 10 seconds.
- Through-spindle coolant capability.
- Coolant through holders require no special backup screws or seals. The interference fit between the ID of the tool holder and cutting tool shank forms the seal, preventing the coolant from flowing anywhere else except through the coolant grooves. The use of Heat Shrink Tooling allows for greater speeds and feeds, better finishes, increased tool life, and increased productivity due to its High Speed Machining capability and simplicity of use.

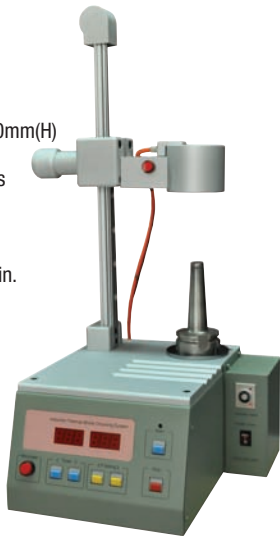
New



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.



Model	Code No.
GTS306 LUXE	536-650

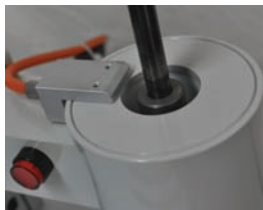
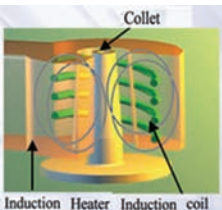
Model GTS-9000M

- 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.

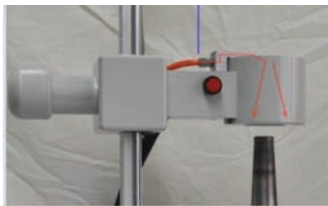


Model	Code No.
GTS9000M	536-655

Heat generated by high frequency magnetic field



Air Cooling



CAT 40 Balanceable Shrink Fit Holders

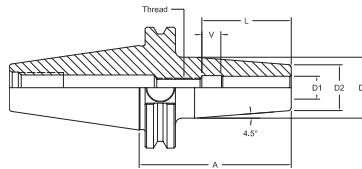
New

- With threaded holes in order to balance with supplied balancing screws
- Coolant thru the spindle capability
- Pre-Balanced up to 30,000 rpm
- For maximum gripping power with exceptional concentricity.
- Concentricity of $\leq .0001''$ with tool shrunk in holder.
- Tool is gripped 360° along the entire length of bore resulting in an evenly distributed clamping force.
- Back up screws are available on request

CAT 40
Premium
Balanced
30x
RPM



Complete with certificate



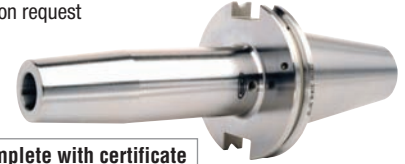
Taper	Hole Dia. (d)	Gauge Length (A)	D2	D3	L	Code No.
Inch						
CAT40	1/8	3.15"	0.39"	0.75"	0.35"	531-838
CAT40	3/16	3.15"	0.39"	0.75"	0.47"	531-840
CAT40	1/4	3.15"	0.83"	1.06"	1.42"	531-842
CAT40	1/4	6.30"	0.83"	1.06"	1.42"	531-844
CAT40	5/16	3.15"	0.83"	1.06"	1.42"	531-846
CAT40	5/16	6.30"	0.83"	1.06"	1.42"	531-848
CAT40	3/8	3.15"	0.94"	1.26"	1.65"	531-850
CAT40	3/8	6.30"	0.94"	1.26"	1.65"	531-852
CAT40	1/2	3.15"	0.94"	1.26"	1.65"	531-854
CAT40	1/2	6.30"	0.94"	1.26"	1.65"	531-856
CAT40	5/8	3.15"	1.06"	1.34"	1.97"	531-858
CAT40	5/8	6.30"	1.06"	1.34"	1.97"	531-860
CAT40	3/4	3.15"	1.30"	1.65"	2.05"	531-862
CAT40	3/4	6.30"	1.30"	1.65"	2.05"	531-864
CAT40	1	3.94"	1.73"	2.09"	2.28"	531-866
CAT40	1	6.30"	1.73"	2.09"	2.28"	531-868
CAT40	1-1/4	3.94"	1.73"	2.09"	2.28"	531-870
CAT40	1-1/4	6.30"	1.73"	2.09"	2.28"	531-872
Metric						
CAT40	3	80	10	19.6	9	531-800
CAT40	4	80	10	19.6	12	531-802
CAT40	5	80	10	19.6	15	531-804
CAT40	6	80	21	27	36	531-806
CAT40	6	160	21	27	36	531-808
CAT40	8	80	21	27	36	531-810
CAT40	8	160	21	27	36	531-812
CAT40	10	80	24	32	42	531-814
CAT40	10	160	24	32	42	531-816
CAT40	12	80	24	32	47	531-818
CAT40	12	160	24	32	47	531-820
CAT40	16	80	27	34	50	531-822
CAT40	16	160	27	34	50	531-824
CAT40	20	80	33	42	52	531-826
CAT40	20	160	33	42	52	531-828
CAT40	25	80	44	53	58	531-830
CAT40	25	160	44	53	58	531-832
CAT40	32	80	44	53	58	531-834
CAT40	32	160	44	53	58	531-836

CAT 50 Balanceable Shrink Fit Holders

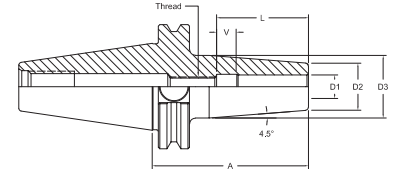
New

- With threaded holes in order to balance with supplied balancing screws
- Coolant thru the spindle capability
- Pre-Balanced up to 25,000 rpm
- For maximum gripping power with exceptional concentricity.
- Concentricity of $\leq .0001''$ with tool shrunk in holder.
- Tool is gripped 360° along the entire length of bore resulting in an evenly distributed clamping force.
- Back up screws are available on request

CAT 50
Premium
Balanced
25x
RPM



Complete with certificate



Taper	Hole Dia. (d)	Gauge Length (A)	D2	D3	L	Code No.
Inch						
CAT50	1/4	3.15"	0.83"	1.06"	1.42"	531-932
CAT50	1/4	6.30"	0.83"	1.06"	1.42"	531-934
CAT50	5/16	3.15"	0.83"	1.06"	1.42"	531-936
CAT50	5/16	6.30"	0.83"	1.06"	1.42"	531-938
CAT50	3/8	3.15"	0.94"	1.26"	1.65"	531-940
CAT50	3/8	6.30"	0.94"	1.26"	1.65"	531-942
CAT50	1/2	3.15"	0.94"	1.26"	1.65"	531-944
CAT50	1/2	6.30"	0.94"	1.26"	1.65"	531-946
CAT50	5/8	3.15"	1.06"	1.34"	1.97"	531-948
CAT50	5/8	6.30"	1.06"	1.34"	1.97"	531-950
CAT50	3/4	3.15"	1.30"	1.65"	2.05"	531-952
CAT50	3/4	6.30"	1.30"	1.65"	2.05"	531-954
CAT50	1	3.94"	1.73"	2.09"	2.28"	531-956
CAT50	1	6.30"	1.73"	2.09"	2.28"	531-958
CAT50	1-1/4	3.94"	1.73"	2.09"	2.28"	531-960
CAT50	1-1/4	6.30"	1.73"	2.09"	2.28"	531-962
Metric						
CAT50	6	80	21	27	36	531-900
CAT50	6	160	21	27	36	531-902
CAT50	8	80	21	27	36	531-904
CAT50	8	160	21	27	36	531-906
CAT50	10	80	24	32	42	531-908
CAT50	10	160	24	32	42	531-910
CAT50	12	80	24	32	47	531-912
CAT50	12	160	24	32	47	531-914
CAT50	16	80	27	34	50	531-916
CAT50	16	160	27	34	50	531-918
CAT50	20	80	33	42	52	531-920
CAT50	20	160	33	42	52	531-922
CAT50	25	100	44	53	58	531-924
CAT50	25	160	44	53	58	531-926
CAT50	32	100	44	53	58	531-928
CAT50	32	160	44	53	58	531-930

BT 30 Balanceable Shrink Fit Holders

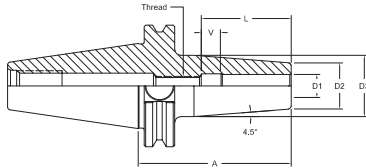
New

- With threaded holes in order to balance with supplied balancing screws
- Coolant thru the spindle capability
- Pre-Balanced up to 20,000 rpm
- For maximum gripping power with exceptional concentricity.
- Concentricity of $\leq .0001$ " with tool shrunk in holder.
- Tool is gripped 360° along the entire length of bore resulting in an evenly distributed clamping force.
- Back up screws are available on request

BT 30
Premium
Balanced
20x
RPM



Complete with certificate



BT 40 Balanceable Shrink Fit Holders

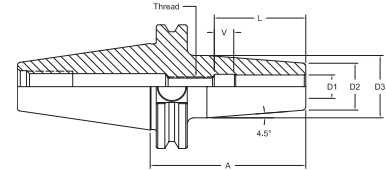
New

- With threaded holes in order to balance with supplied balancing screws
- Coolant thru the spindle capability
- Pre-Balanced up to 30,000 rpm
- For maximum gripping power with exceptional concentricity.
- Concentricity of $\leq .0001$ " with tool shrunk in holder.
- Tool is gripped 360° along the entire length of bore resulting in an evenly distributed clamping force.
- Back up screws are available on request

BT 40
Premium
Balanced
30x
RPM



Complete with certificate



Taper	Hole Dia. (d)	Gauge Length (A)	D2	D3	L	Code No.
Inch						
BT30	1/8	3.15"	0.39"		0.35"	532-414
BT30	3/16	3.15"	0.39"		0.47"	532-416
BT30	1/4	3.15"	0.83"	1.06"	1.42"	532-418
BT30	5/16	3.15"	0.83"	1.06"	1.42"	532-420
BT30	3/8	3.15"	0.94"	1.26"	1.65"	532-422
BT30	1/2	3.15"	0.94"	1.26"	1.65"	532-424
Metric						
BT30	3	80	10		9	532-400
BT30	4	80	10		12	532-402
BT30	5	80	10		15	532-404
BT30	6	80	21	27	36	532-406
BT30	8	80	21	27	36	532-408
BT30	10	80	24	32	42	532-410
BT30	12	80	24	32	47	532-412

Taper	Hole Dia. (d)	Gauge Length (A)	D2	D3	L	Code No.
Inch						
BT40	1/8	3.54"	0.39"		0.35"	532-464
BT40	3/16	3.54"	0.39"		0.47"	532-466
BT40	1/4	3.54"	0.83"	1.06"	1.42"	532-468
BT40	1/4	6.30"	0.83"	1.06"	1.42"	532-470
BT40	5/16	3.54"	0.83"	1.06"	1.42"	532-472
BT40	5/16	6.30"	0.83"	1.06"	1.42"	532-474
BT40	3/8	3.54"	0.94"	1.26"	1.65"	532-476
BT40	3/8	6.30"	0.94"	1.26"	1.65"	532-478
BT40	1/2	3.54"	0.94"	1.26"	1.65"	532-480
BT40	1/2	6.30"	0.94"	1.26"	1.65"	532-482
BT40	5/8	3.54"	1.06"	1.34"	1.97"	532-484
BT40	5/8	6.30"	1.06"	1.34"	1.97"	532-486
BT40	3/4	3.54"	1.30"	1.65"	2.05"	532-488
BT40	3/4	6.30"	1.30"	1.65"	2.05"	532-490
BT40	1	3.94"	1.73"	2.09"	2.28"	532-492
BT40	1	6.30"	1.73"	2.09"	2.28"	532-494
BT40	1-1/4	3.94"	1.73"	2.09"	2.28"	532-496
BT40	1-1/4	6.30"	1.73"	2.09"	2.28"	532-498
Metric						
BT40	3	90	10		9	532-426
BT40	4	90	10		12	532-428
BT40	5	90	10		15	532-430
BT40	6	90	21	27	36	532-432
BT40	6	160	21	27	36	532-434
BT40	8	90	21	27	36	532-436
BT40	8	160	21	27	36	532-438
BT40	10	90	24	32	42	532-440
BT40	10	160	24	32	42	532-442
BT40	12	90	24	32	47	532-444
BT40	12	160	24	32	47	532-446
BT40	16	90	27	34	50	532-448
BT40	16	160	27	34	50	532-450
BT40	20	90	33	42	52	532-452
BT40	20	160	33	42	52	532-454
BT40	25	100	44	53	58	532-456
BT40	25	160	44	53	58	532-458
BT40	32	100	44	53	58	532-460
BT40	32	160	44	53	58	532-462

HSK 63A Balanceable Shrink Fit Holders

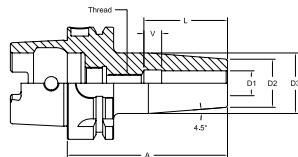
New

- With threaded holes in order to balance with supplied balancing screws
- Coolant thru the spindle capability
- Pre-Balanced up to 30,000 rpm
- For maximum gripping power with exceptional concentricity.
- Concentricity of $\leq .0001$ " with tool shrunk in holder.
- Tool is gripped 360° along the entire length of bore resulting in an evenly distributed clamping force.
- Back up screws are available on request

HSK 63
Premium
Balanced
30x
RPM



Complete with certificate



Taper	Hole Dia. (d)	Gauge Length (A)	D2	D3	L	Code No.
Inch						
HSK63A	1/8	3.15"	0.39"		0.35"	536-338
HSK63A	3/16	3.15"	0.39"		0.47"	536-340
HSK63A	1/4	3.15"	0.83"	1.06"	1.42"	536-342
HSK63A	1/4	6.30"	0.83"	1.06"	1.42"	536-344
HSK63A	5/16	3.15"	0.83"	1.06"	1.42"	536-346
HSK63A	5/16	6.30"	0.83"	1.06"	1.42"	536-348
HSK63A	3/8	3.35"	0.94"	1.26"	1.65"	536-350
HSK63A	3/8	6.30"	0.94"	1.26"	1.65"	536-352
HSK63A	1/2	3.54"	0.94"	1.26"	1.65"	536-354
HSK63A	1/2	6.30"	0.94"	1.26"	1.65"	536-356
HSK63A	5/8	3.74"	1.06"	1.34"	1.97"	536-358
HSK63A	5/8	6.30"	1.06"	1.34"	1.97"	536-360
HSK63A	3/4	3.94"	1.30"	1.65"	2.05"	536-362
HSK63A	3/4	6.30"	1.30"	1.65"	2.05"	536-364
HSK63A	1	4.53"	1.73"	2.09"	2.28"	536-366
HSK63A	1	6.30"	1.73"	2.09"	2.28"	536-368
HSK63A	1-1/4	4.72"	1.73"	2.09"	2.28"	536-370
HSK63A	1-1/4	6.30"	1.73"	2.09"	2.28"	536-372
Metric						
HSK63A	3	80	10		9	536-300
HSK63A	4	80	10		12	536-302
HSK63A	5	80	10		15	536-304
HSK63A	6	80	21	27	36	536-306
HSK63A	6	160	21	27	36	536-308
HSK63A	8	80	21	27	36	536-310
HSK63A	8	160	21	27	36	536-312
HSK63A	10	85	24	32	42	536-314
HSK63A	10	160	24	32	42	536-316
HSK63A	12	90	24	32	47	536-318
HSK63A	12	160	24	32	47	536-320
HSK63A	16	95	27	34	50	536-322
HSK63A	16	160	27	34	50	536-324
HSK63A	20	100	33	42	52	536-326
HSK63A	20	160	33	42	52	536-328
HSK63A	25	115	44	53	58	536-330
HSK63A	25	160	44	53	58	536-332
HSK63A	32	120	44	53	58	536-334
HSK63A	32	160	44	53	58	536-336

HSK 100A Balanceable Shrink Fit Holders

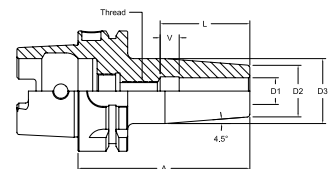
New

- With threaded holes in order to balance with supplied balancing screws
- Coolant thru the spindle capability
- Pre-Balanced up to 25,000 rpm
- For maximum gripping power with exceptional concentricity.
- Concentricity of $\leq .0001$ " with tool shrunk in holder.
- Tool is gripped 360° along the entire length of bore resulting in an evenly distributed clamping force.
- Back up screws are available on request

HSK 100
Premium
Balanced
25x
RPM



Complete with certificate



Taper	Hole Dia. (d)	Gauge Length (A)	D2	D3	L	Code No.
Inch						
HSK100A	1/4	3.35"	0.83"	1.06"	1.42"	536-432
HSK100A	1/4	6.30"	0.83"	1.06"	1.42"	536-434
HSK100A	5/16	3.35"	0.83"	1.06"	1.42"	536-436
HSK100A	5/16	6.30"	0.83"	1.06"	1.42"	536-438
HSK100A	3/8	3.54"	0.94"	1.26"	1.65"	536-440
HSK100A	3/8	6.30"	0.94"	1.26"	1.65"	536-442
HSK100A	1/2	3.74"	0.94"	1.26"	1.65"	536-444
HSK100A	1/2	6.30"	0.94"	1.26"	1.65"	536-446
HSK100A	5/8	3.94"	1.06"	1.34"	1.97"	536-448
HSK100A	5/8	6.30"	1.06"	1.34"	1.97"	536-450
HSK100A	3/4	4.13"	1.30"	1.65"	2.05"	536-452
HSK100A	3/4	6.30"	1.30"	1.65"	2.05"	536-454
HSK100A	1	4.53"	1.73"	2.09"	2.28"	536-456
HSK100A	1	6.30"	1.73"	2.09"	2.28"	536-458
HSK100A	1-1/4	4.72"	1.73"	2.09"	2.28"	536-460
HSK100A	1-1/4	6.30"	1.73"	2.09"	2.28"	536-462
Metric						
HSK100A	6	85	21	27	36	536-400
HSK100A	6	160	21	27	36	536-402
HSK100A	8	85	21	27	36	536-404
HSK100A	8	160	21	27	36	536-406
HSK100A	10	90	24	32	42	536-408
HSK100A	10	160	24	32	42	536-410
HSK100A	12	95	24	32	47	536-412
HSK100A	12	160	24	32	47	536-414
HSK100A	16	100	27	34	50	536-416
HSK100A	16	160	27	34	50	536-418
HSK100A	20	105	33	42	52	536-420
HSK100A	20	160	33	42	52	536-422
HSK100A	25	115	44	53	58	536-424
HSK100A	25	160	44	53	58	536-426
HSK100A	32	120	44	53	58	536-428
HSK100A	32	160	44	53	58	536-430

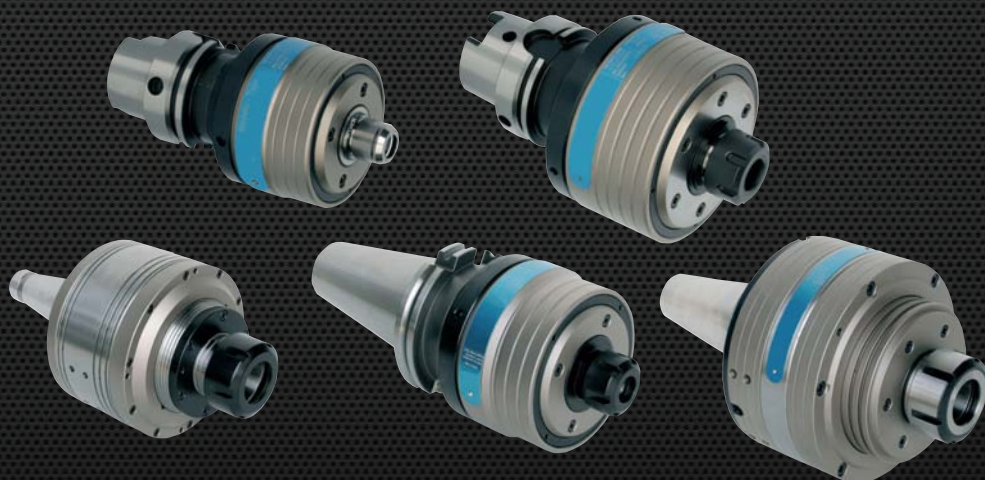
RIGHT ANGLE HEADS & SPINDLE SPEEDERS

RIGHT ANGLE HEADS

GFX07 ER 11 Fixed 90° Right Angle Heads	52
GFX07L ER 11 Fixed 90° Right Angle Heads	53
GFX10 ER 16 Fixed 90° Right Angle Heads	54
GFX10L ER 16 Fixed 90° Right Angle Heads	55
GFX16 ER 25 Fixed 90° Right Angle Heads	56
GFX16L ER 25 Fixed 90° Right Angle Heads	57
GFX20 ER 32 Fixed 90° Right Angle Head	58
GFX20L ER 32 Fixed 90° Right Angle Head	59
GFX40 Fixed 90° Right Angle Heads	60
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GPV16 ER 25 Pivoting Angle Heads	62
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SPINDLE SPEEDERS

CAT Taper Spindle Speeders	65
BT Taper Spindle Speeders	66
HSK Spindle Speeders	67
NMTB Taper Spindle Speeders	68



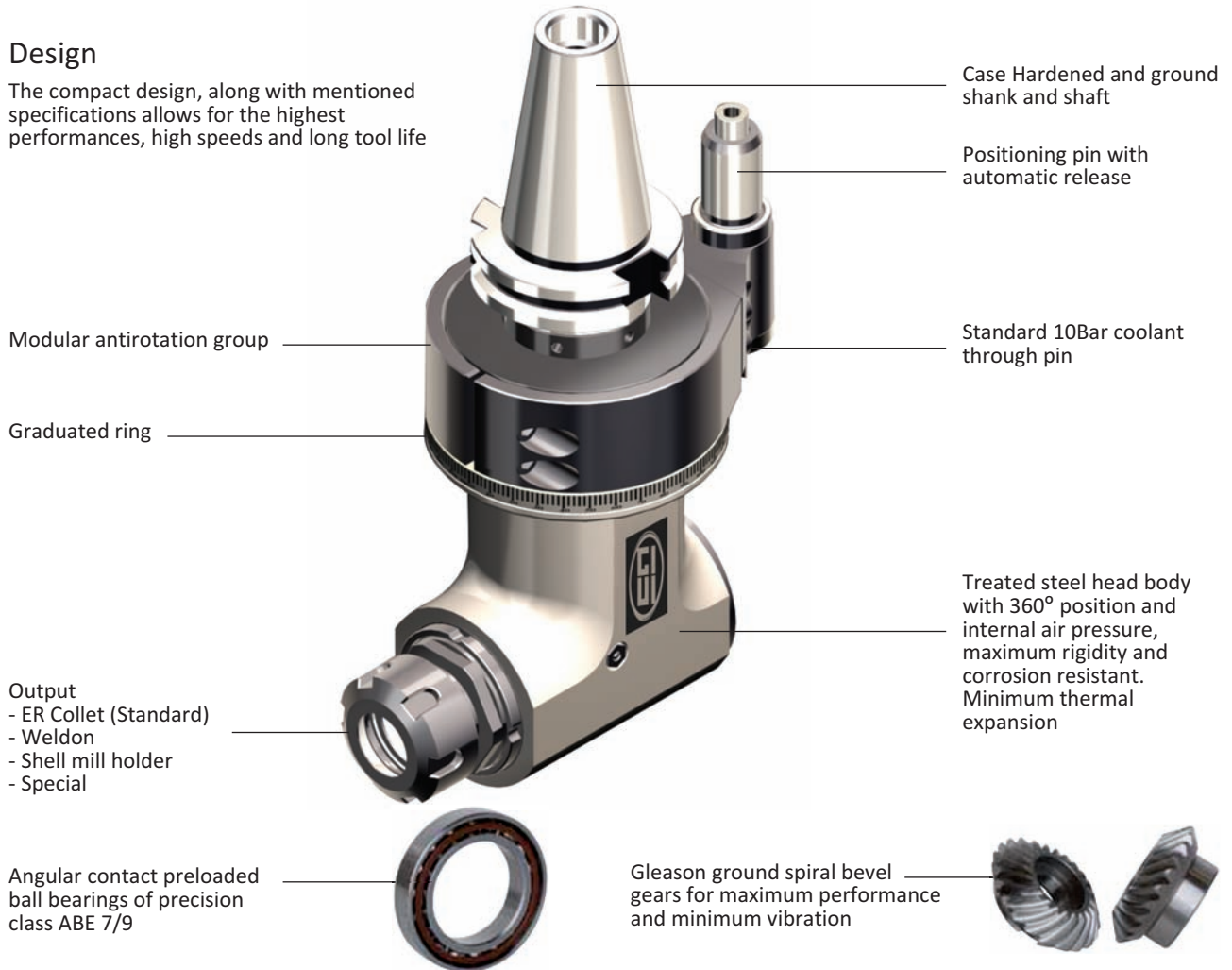
ATC Series

MADE IN ITALY

Designed for Automatic Tool Change Machines

Design

The compact design, along with mentioned specifications allows for the highest performances, high speeds and long tool life



Case Hardened and ground shank and shaft

Positioning pin with automatic release

Modular antirotation group

Standard 10Bar coolant through pin

Graduated ring

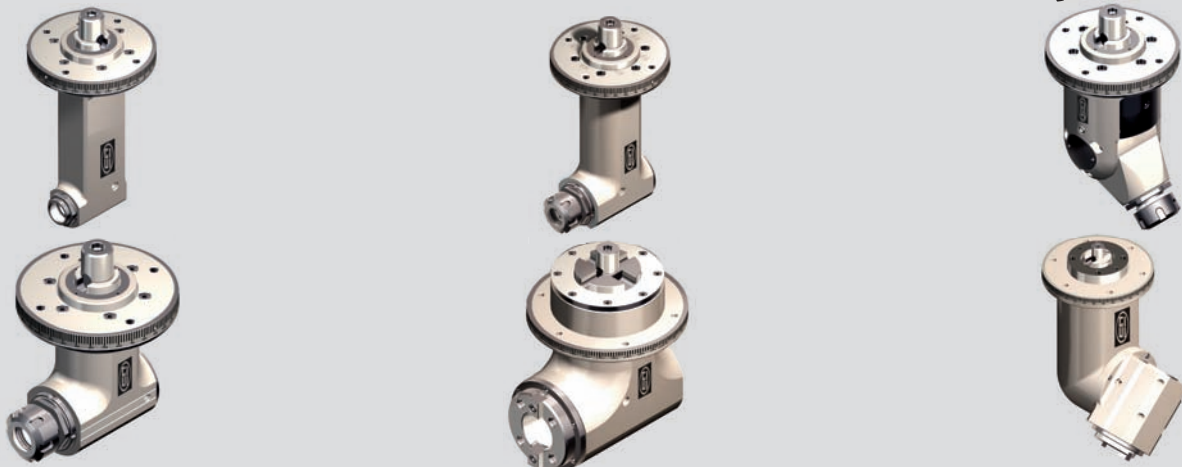
Treated steel head body with 360° position and internal air pressure, maximum rigidity and corrosion resistant. Minimum thermal expansion

Output
- ER Collet (Standard)
- Weldon
- Shell mill holder
- Special

Angular contact preloaded ball bearings of precision class ABE 7/9

Gleason ground spiral bevel gears for maximum performance and minimum vibration

Also Available: MTC Manual Fixed & Pivoting Heads

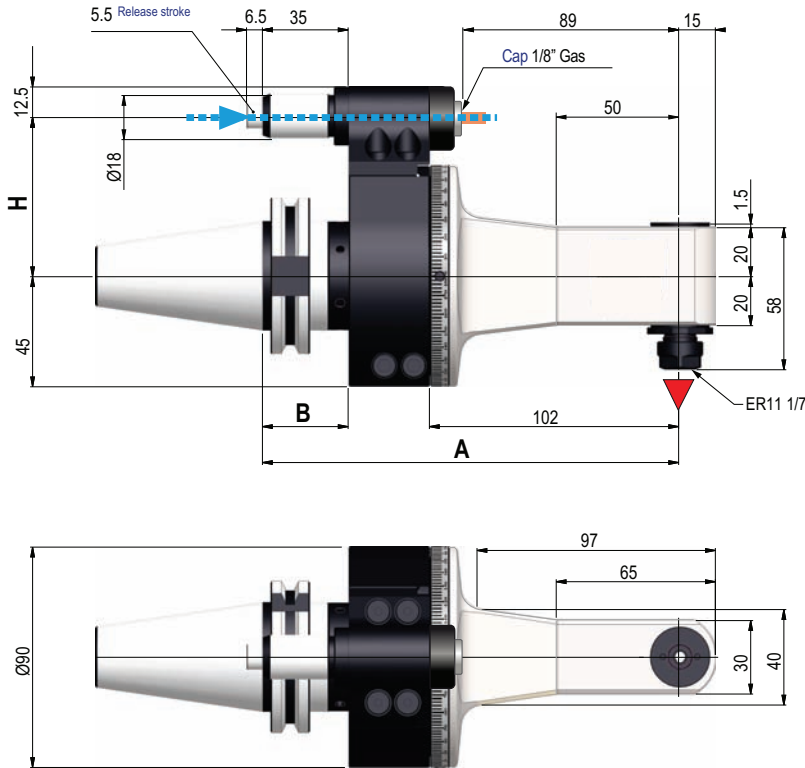


We invite all inquiries

ATC 90° FIXED RIGHT ANGLE HEADS

MADE IN ITALY

GFX07



Pull Stud



Direction of rotation is opposite to the machine spindle

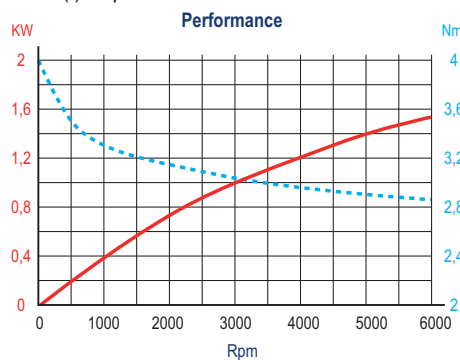
GFX07 ER 11 Fixed 90° Right Angle Heads

Taper	Model	Collet System	A (mm)	B (mm)	H (mm)	End Mill & Drill Cap. (mm)	Tap Size Capacity	Max R.P.M.	Weight (Kg.)	Code No.
CAT 40	GFX07	ER 11	170	35	65-80 (110)*	7	M5	6,000	4	381-002
CAT 50	GFX07	ER 11	170	35	80 (110)*	7	M5	6,000	4	381-004
BT 40	GFX07	ER 11	170	35	65-80 (110)*	7	M5	6,000	4	381-006
BT 50	GFX07	ER 11	176	41	80 (110)*	7	M5	6,000	4	381-008
HSK63	GFX07	ER 11	177	42	65-80 (110)*	7	M5	6,000	4	381-010
HSK100	GFX07	ER 11	180	45	80 (110)*	7	M5	6,000	4	381-012

Other tapers available please inquire

Technical Data		GFX 7
Ratio		1:1
RPM Max	g/min	6,000
Max axial load	N	120
Torque	Nm	5
Weight	Kg.	4
Collet	mm	ER-11 0.5mm - 7mm

(*) Optional



Standard Features & Equipment Included:

- Internal coolant from positioning pin
- Internal air pressure
- Retaining block
- Wrenches
- Grease tube
- Instruction book & Inspection report

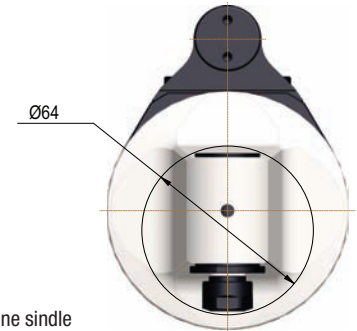
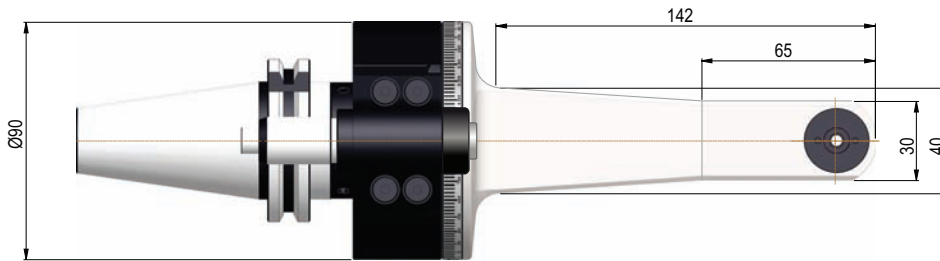
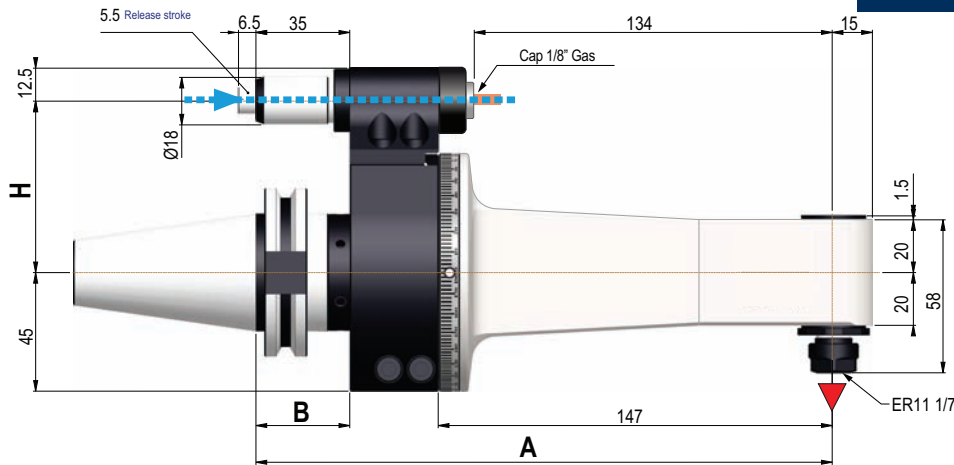


ATC 90° FIXED RIGHT ANGLE HEADS

MADE IN ITALY



GFX07L



▼ Direction of rotation is opposite to the machine spindle

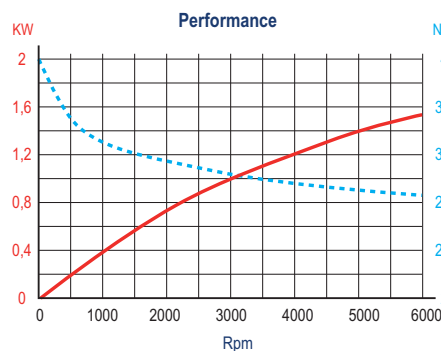
GFX07L ER 11 Long Fixed 90° Right Angle Heads

Taper	Model	Collet System	A (mm)	B (mm)	H (mm)	End Mill & Drill Cap. (mm)	Tap Size Capacity	Max R.P.M.	Weight (Kg.)	Code No.
CAT 40	GFX07L	ER 11	215	35	65-80 (110)*	7	M5	6,000	4.3	381-302
CAT 50	GFX07L	ER 11	215	35	80 (110)*	7	M5	6,000	4.3	381-304
BT 40	GFX07L	ER 11	215	35	65-80 (110)*	7	M5	6,000	4.3	381-306
BT 50	GFX07L	ER 11	221	41	80 (110)*	7	M5	6,000	4.3	381-308
HSK63	GFX07L	ER 11	222	42	65-80 (110)*	7	M5	6,000	4.3	381-310
HSK100	GFX07L	ER 11	225	45	80 (110)*	7	M5	6,000	4.3	381-312

Other tapers available please inquire

() * Optional

Technical Data		GFX 7L
Ratio		1:1
RPM Max	g/min	6,000
Max axial load	N	120
Torque	Nm	5
Weight	Kg.	4.3
Collet	mm	ER-11 0.5mm - 7mm



Standard Features & Equipment Included:

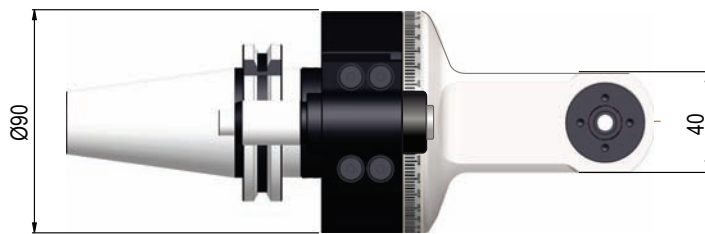
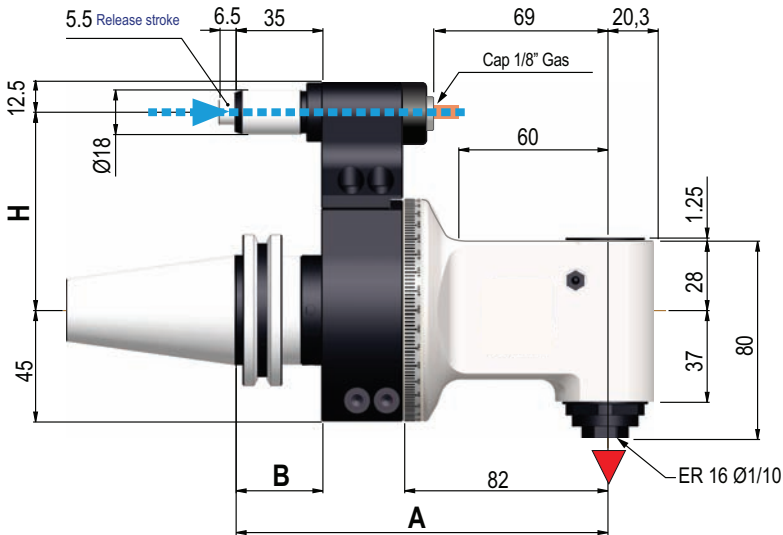
- Internal coolant from positioning pin
- Internal air pressure
- Retaining block
- Wrenches
- Grease tube
- Instruction book & Inspection report



ATC 90° FIXED RIGHT ANGLE HEADS

MADE IN ITALY

GFX10



Direction of rotation is opposite to the machine spindle

Pull Stud



pg 92

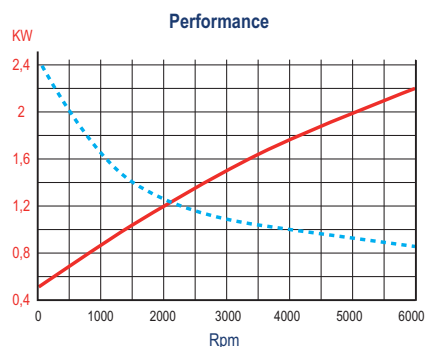
GFX10 ER 16 Fixed 90° Right Angle Heads

Taper	Model	Collet System	A (mm)	B (mm)	H (mm)	End Mill & Drill Cap. (mm)	Tap Size Capacity	Max R.P.M.	Weight (Kg.)	Code No.
CAT 40	GFX10	ER 16	150	35	65-80 (110)*	10	M8	4,000	4.3	381-020
CAT 50	GFX10	ER 16	150	35	80 (110)*	10	M8	4,000	4.3	381-022
BT 40	GFX10	ER 16	150	35	65-80 (110)*	10	M8	4,000	4.3	381-024
BT 50	GFX10	ER 16	156	41	80 (110)*	10	M8	4,000	4.3	381-026
HSK63	GFX10	ER 16	157	42	65-80 (110)*	10	M8	4,000	4.3	381-028
HSK100	GFX10	ER 16	160	45	80 (110)*	10	M8	4,000	4.3	381-030

Other tapers available please inquire

() * Optional

Technical Data		GFX10L
Ratio		1:1
RPM Max	g/min	4,000
Max axial load	N	250
Torque	Nm	7
Weight	Kg.	4.3
Collet	mm	ER-16 1mm - 10mm



Standard Features & Equipment Included:

- Internal coolant from positioning pin
- Internal air pressure
- Retaining block
- Wrenches
- Grease tube
- Instruction book & Inspection report

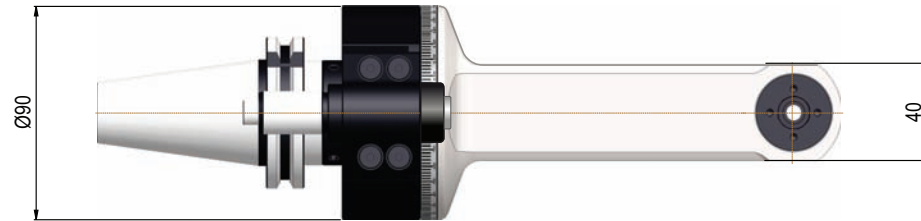
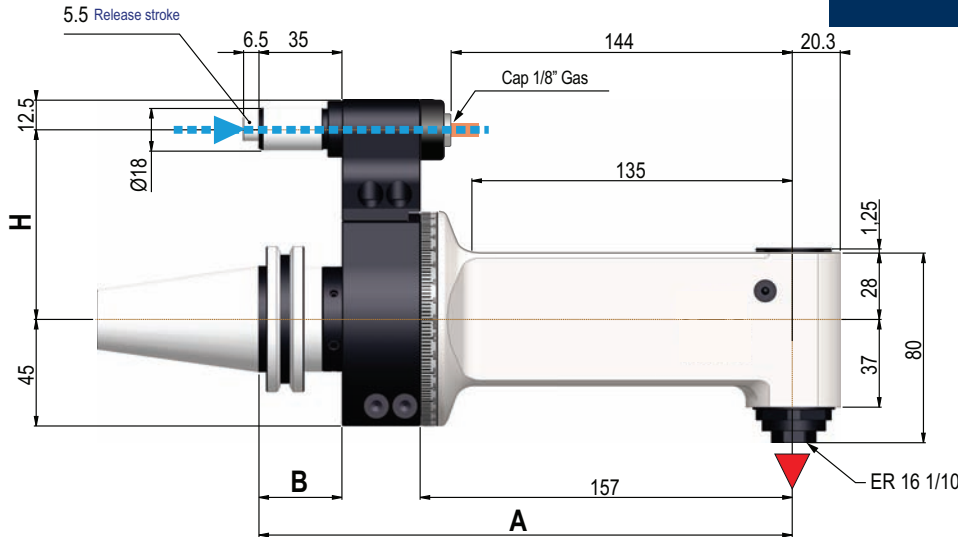


ATC 90° FIXED RIGHT ANGLE HEADS

MADE IN ITALY



GFX10L



▼ Direction of rotation is opposite to the machine spindle

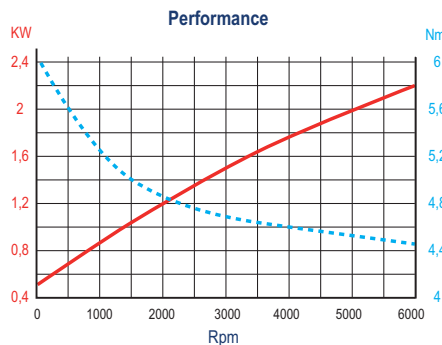
GFX10L ER 16 Long Fixed 90° Right Angle Heads

Taper	Model	Collet System	A (mm)	B (mm)	H (mm)	End Mill & Drill Cap. (mm)	Tap Size Capacity	Max R.P.M.	Weight (Kg.)	Code No.
CAT 40	GFX10L	ER 16	225	35	65-80 (110)*	10	M8	6,000	5.2	381-320
CAT 50	GFX10L	ER 16	225	35	80 (110)*	10	M8	6,000	5.2	381-322
BT 40	GFX10L	ER 16	225	35	65-80 (110)*	10	M8	6,000	5.2	381-324
BT 50	GFX10L	ER 16	231	41	80 (110)*	10	M8	6,000	5.2	381-326
HSK63	GFX10L	ER 16	232	42	65-80 (110)*	10	M8	6,000	5.2	381-328
HSK100	GFX10L	ER 16	235	45	80 (110)*	10	M8	6,000	5.2	381-330

Other tapers available please inquire

() * Optional

Technical Data		GFX10L
Ratio		1:1
RPM Max	g/min	6,000
Max axial load	N	250
Torque	Nm	7
Weight	Kg.	5.2
Collet	mm	ER-16 1mm - 10mm



Standard Features & Equipment Included:

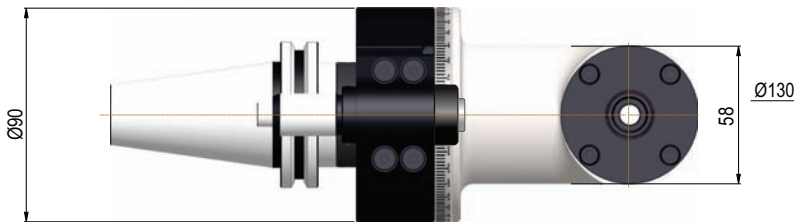
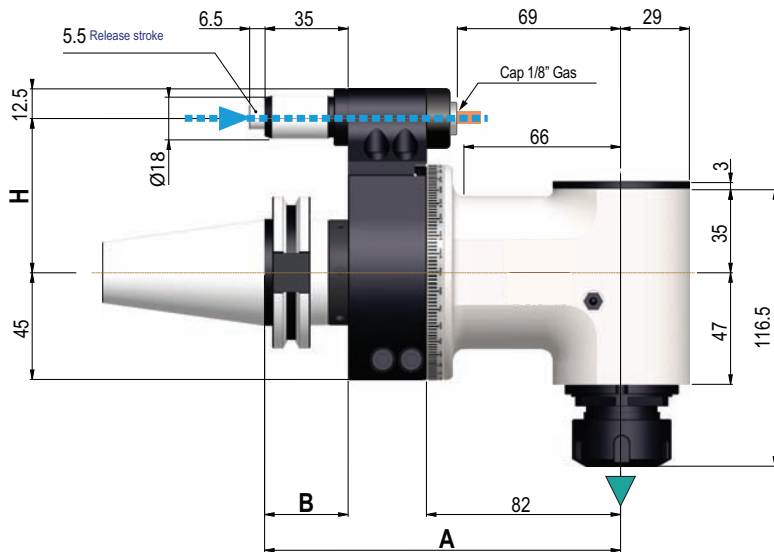
- Internal coolant from positioning pin
- Internal air pressure
- Retaining block
- Wrenches
- Grease tube
- Instruction book & Inspection report



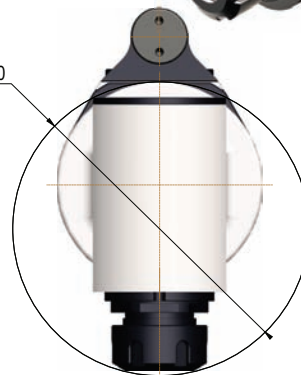
ATC 90° FIXED RIGHT ANGLE HEADS

MADE IN ITALY

GFX16



▼ Direction of rotation is the same as the machine spindle



Pull Stud



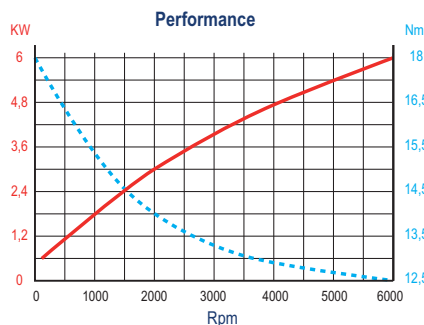
GFX16 ER 25 Fixed 90° Right Angle Heads

Taper	Model	System Collet	A (mm)	B (mm)	H (mm)	End Mill & Drill Cap. (mm)	Tap Size Capacity	Max R.P.M.	Weight (Kg.)	Code No.
CAT 40	GFX16	ER 25	150	35	65-80 (110)*	16	M12	4,000	5.4	381-100
CAT 50	GFX16	ER 25	150	35	80 (110)*	16	M12	4,000	5.4	381-102
BT 40	GFX16	ER 25	150	35	65-80 (110)*	16	M12	4,000	5.4	381-104
BT 50	GFX16	ER 25	156	41	80 (110)*	16	M12	4,000	5.4	381-106
HSK63	GFX16	ER 25	157	42	65-80 (110)*	16	M12	4,000	5.4	381-108
HSK100	GFX16	ER 25	160	45	80 (110)*	16	M12	4,000	5.4	381-110

Other tapers available please inquire

(*) Optional

Technical Data		GFX16
Ratio		1:1
RPM Max	g/min	4,000
Max axial load	N	510
Torque	Nm	20
Weight	Kg.	5.4
Collet	mm	ER-25 2mm - 16mm



Standard Features & Equipment Included:

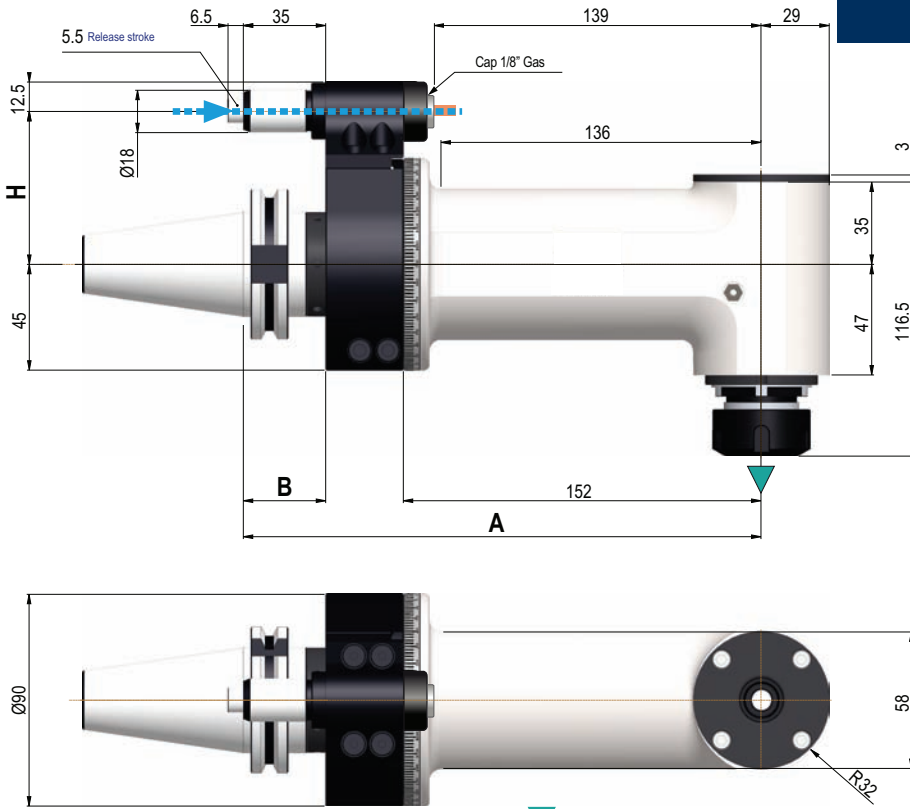
- Internal coolant from positioning pin
- Internal air pressure
- Retaining block
- Wrenches
- Grease tube
- Instruction book & Inspection report



ATC 90° FIXED RIGHT ANGLE HEADS

MADE IN ITALY

GFX16L



▼ Direction of rotation is the same as the machine spindle

Pull Stud

pg 92

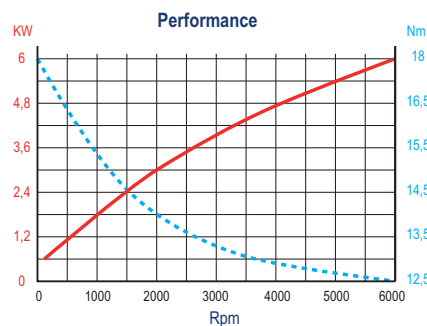
GFX16L ER 25 Long Fixed 90° Right Angle Heads

Taper	Model	Collet System	A (mm)	B (mm)	H (mm)	End Mill & Drill Cap. (mm)	Tap Size Capacity	Max R.P.M.	Weight (Kg.)	Code No.
CAT 40	GFX16L	ER 25	220	35	65-80 (110)*	16	M12	4,000	6.7	381-400
CAT 50	GFX16L	ER 25	220	35	80 (110)*	16	M12	4,000	6.7	381-402
BT 40	GFX16L	ER 25	220	35	65-80 (110)*	16	M12	4,000	6.7	381-404
BT 50	GFX16L	ER 25	226	41	80 (110)*	16	M12	4,000	6.7	381-406
HSK63	GFX16L	ER 25	227	42	65-80 (110)*	16	M12	4,000	6.7	381-408
HSK100	GFX16L	ER 25	230	45	80 (110)*	16	M12	4,000	6.7	381-410

Other tapers available please inquire

() * Optional

Technical Data		GFX16L
Ratio		1:1
RPM Max	g/min	4,000
Max axial load	N	510
Torque	Nm	20
Weight	Kg.	6.7
Collet	mm	ER-25 2mm - 16mm



Standard Features & Equipment Included:

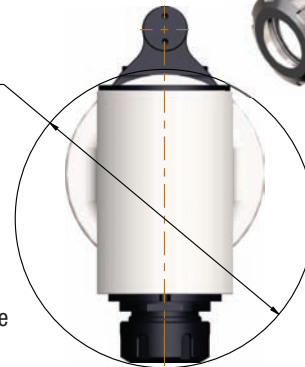
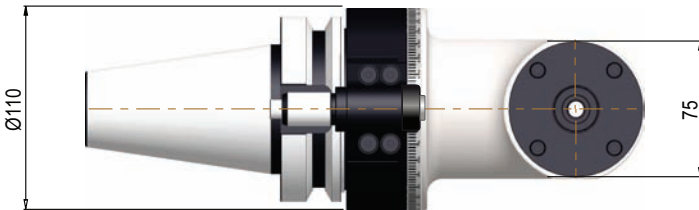
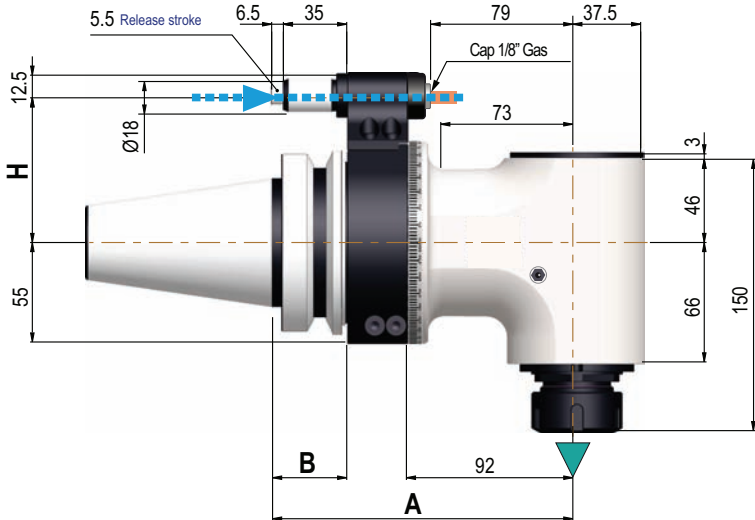
- Internal coolant from positioning pin
- Internal air pressure
- Retaining block
- Wrenches
- Grease tube
- Instruction book & Inspection report



ATC 90° FIXED RIGHT ANGLE HEADS

MADE IN ITALY

GFX20



▼ Direction of rotation is the same as the machine spindle

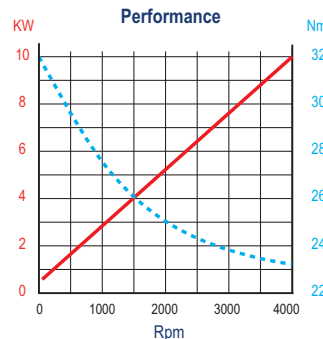
GFX20 ER 32 Fixed 90° Right Angle Head

Taper	Model	Collet System	A (mm)	B (mm)	H (mm)	End Mill & Drill Cap. (mm)	Tap Size Capacity	Max R.P.M.	Weight (Kg.)	Code No.
CAT 50	GFX20	ER 32	160	35	80 (110)*	20	M14	4,000	11	381-148

Other tapers available please inquire

(*) Optional

Technical Data		GFX20
Ratio		1:1
RPM Max	g/min	4,000
Max axial load	N	1250
Torque	Nm	35
Weight	Kg.	11
Collet	mm	ER-32 3mm - 20mm




Standard Features & Equipment Included:

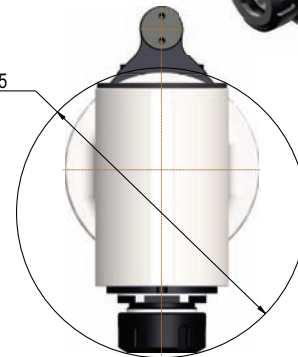
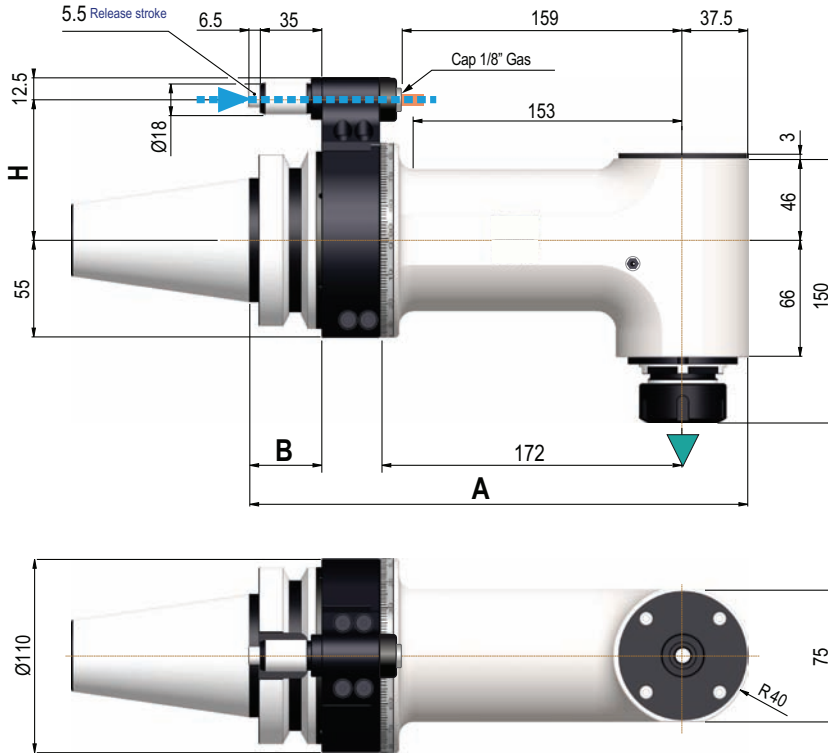
- Internal coolant from positioning pin
- Internal air pressure
- Retaining block
- Wrenches
- Grease tube
- Instruction book & Inspection report



ATC 90° FIXED RIGHT ANGLE HEADS

MADE IN ITALY 

GFX20L



 Direction of rotation is the same as the machine spindle

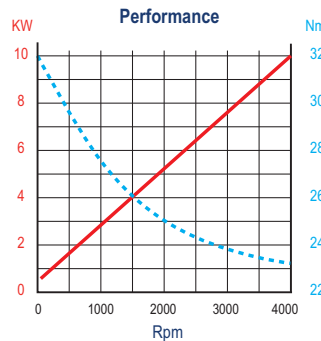
GFX20L ER 32 Long Fixed 90° Right Angle Head

Taper	Model	Collet System	A (mm)	B (mm)	H (mm)	End Mill & Drill Cap. (mm)	Tap Size Capacity	Max R.P.M.	Weight (Kg.)	Code No.
CAT 50	GFX20L	ER 32	240	35	80 (110)*	20	M14	4,000	13.2	381-448

Other tapers available please inquire

() * Optional

Technical Data		GFX20L
Ratio		1:1
RPM Max	g/min	4,000
Max axial load	N	1250
Torque	Nm	35
Weight	Kg.	13.2
Collet	mm	ER-32 3mm - 20mm



Standard Features & Equipment Included:

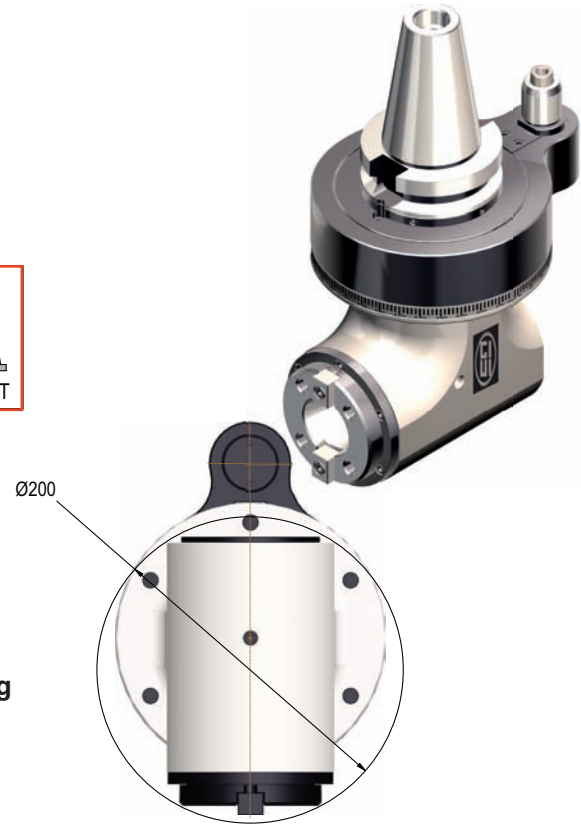
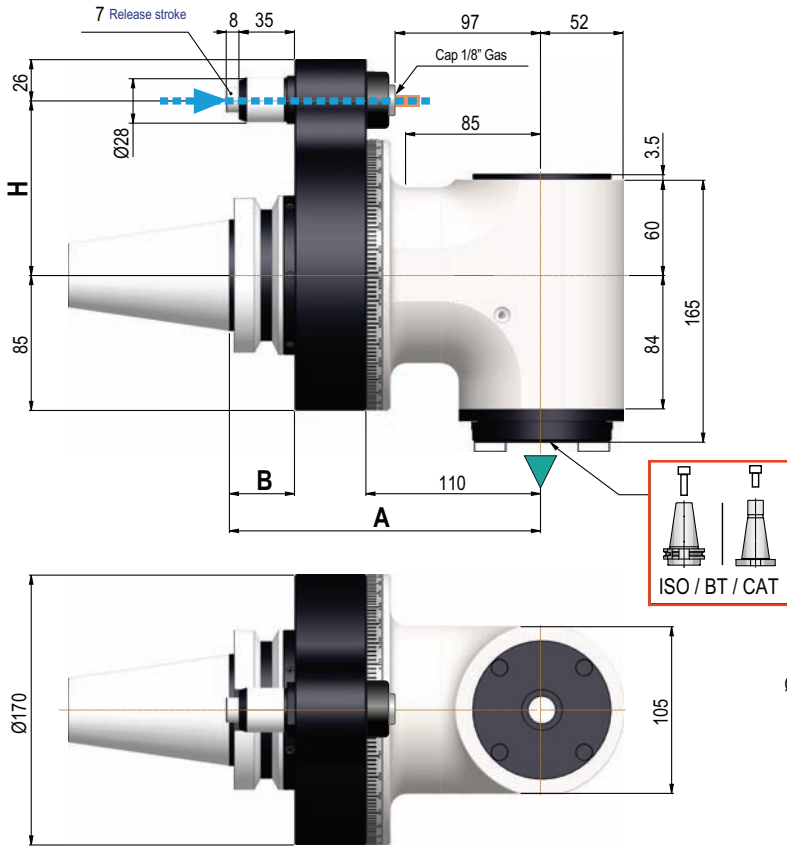
- Internal coolant from positioning pin
- Internal air pressure
- Retaining block
- Wrenches
- Grease tube
- Instruction book & Inspection report



ATC 90° FIXED RIGHT ANGLE HEADS

MADE IN ITALY

GFXS40



Direction of rotation is the same as the machine spindle

Note: Accepts CAT40, BT40, SK40 and NMTB 40 Taper Tooling

Pull Stud

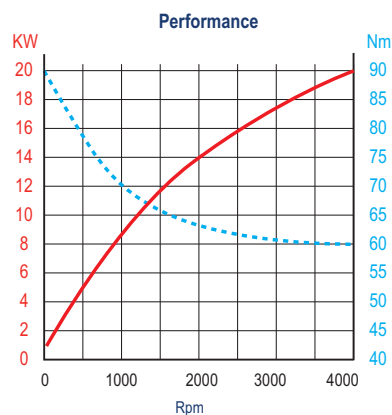


GFX S40 Fixed 90° Right Angle Heads

Taper	Model	A (mm)	B (mm)	H (mm)	End Mill & Drill Cap. (mm)	Tap Size Capacity	Max R.P.M.	Weight (Kg.)	Code No.
CAT 50	GFX S40	190	35	110	26	M20	3,000	22	381-121
BT 50	GFX S40	196	41	110	26	M20	3,000	22	381-123
HSK100	GFX S40	200	45	110	26	M20	3,000	22	381-125

Other tapers available please inquire

Technical Data		GFX S40
Ratio		1:1
RPM Max	g/min	3,000
Max axial load	N	1800
Torque	Nm	90
Weight	Kg.	22
Drill / Tap	mm	26mm / M20




Standard Features & Equipment Included:

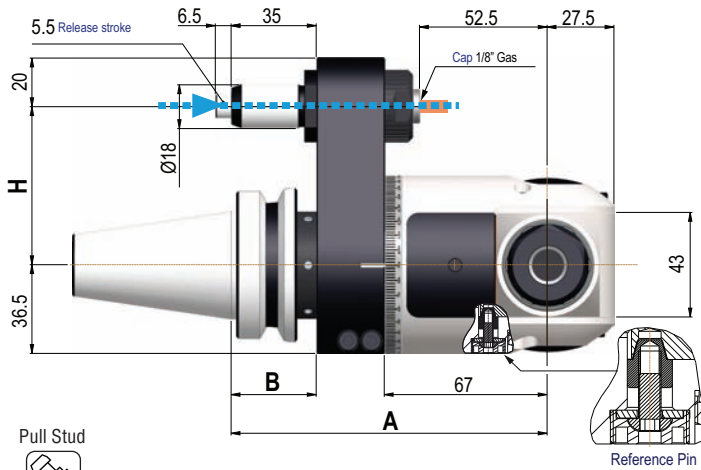
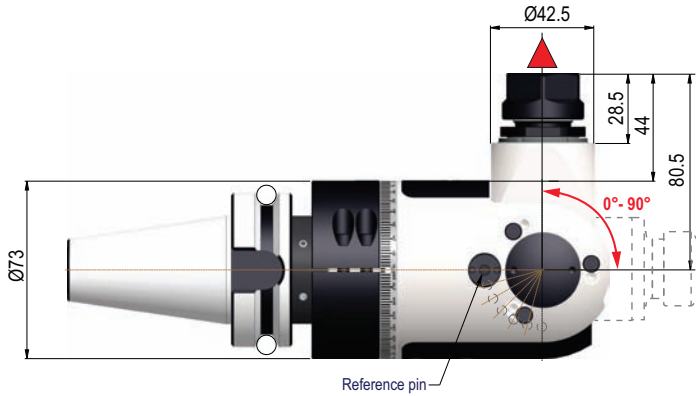
- Internal coolant from positioning pin
- Internal air pressure
- Retaining block
- Grease tube
- Instruction book & Inspection report



ATC PIVOTING ANGLE HEADS

MADE IN ITALY 

GPV13



▼ Direction of rotation is opposite to the machine spindle



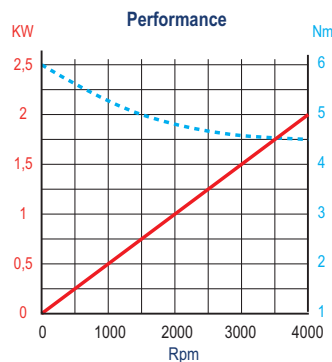
GPV13 ER 20 Pivoting Angle Heads

Taper	Model	Collet System	A (mm)	B (mm)	H (mm)	End Mill & Drill Cap. (mm)	Tap Size Capacity	Max R.P.M.	Weight (Kg.)	Code No.
CAT 40	GPV13	ER 20	130	35	65-80 (110)*	13	M10	4,000	4.2	381-198
CAT 50	GPV13	ER 20	130	35	80 (110)*	13	M10	4,000	4.2	381-200
BT 40	GPV13	ER 20	130	35	65-80 (110)*	13	M10	4,000	4.2	381-202
BT 50	GPV13	ER 20	136	41	80 (110)*	13	M10	4,000	4.2	381-204
HSK63	GPV13	ER 20	137	42	65-80 (110)*	13	M10	4,000	4.2	381-206
HSK100	GPV13	ER 20	140	45	80 (110)*	13	M10	4,000	4.2	381-208

Other tapers available please inquire

() * Optional

Technical Data		GPV13
Ratio		1:1
RPM Max	g/min	4,000
Max axial load	N	450
Torque	Nm	6
Weight	Kg.	4.2
Collet	mm	ER-20 1mm-13mm



Standard Features & Equipment Included:

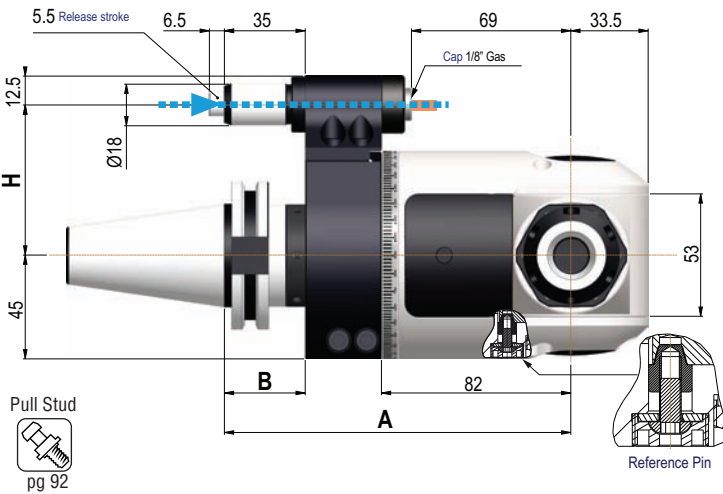
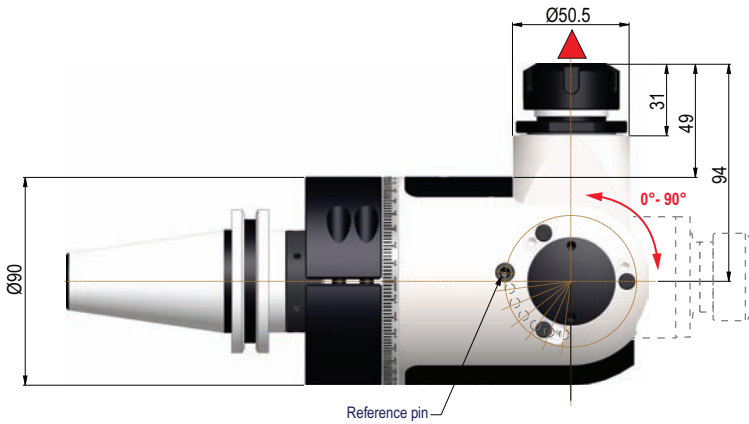
- Internal coolant from positioning pin
- Internal air pressure
- Retaining block
- Wrenches
- Grease tube
- Instruction book & Inspection report



ATC PIVOTING ANGLE HEADS

MADE IN ITALY

GPV16



▼ Direction of rotation is opposite to the machine spindle

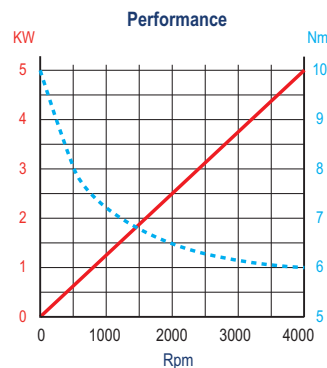
GPV16 ER 25 Pivoting Angle Heads

Taper	Model	Collet System	A (mm)	B (mm)	H (mm)	End Mill & Drill Cap. (mm)	Tap Size Capacity	Max R.P.M.	Weight (Kg.)	Code No.
CAT 40	GPV16	ER 25	150	35	65-80 (110)*	16	M12	4,000	6.8	381-270
CAT 50	GPV16	ER 25	150	35	80 (110)*	16	M12	4,000	6.8	381-272
BT 40	GPV16	ER 25	150	35	65-80 (110)*	16	M12	4,000	6.8	381-274
BT 50	GPV16	ER 25	156	41	80 (110)*	16	M12	4,000	6.8	381-276
HSK63	GPV16	ER 25	157	42	65-80 (110)*	16	M12	4,000	6.8	381-278
HSK100	GPV16	ER 25	160	45	80 (110)*	16	M12	4,000	6.8	381-280

Other tapers available please inquire

() * Optional

Technical Data		GPV16
Ratio		1:1
RPM Max	g/min	4,000
Max axial load	N	480
Torque	Nm	18
Weight	Kg.	6.8
Collet	mm	ER-25 2mm-16mm



Standard Features & Equipment Included:

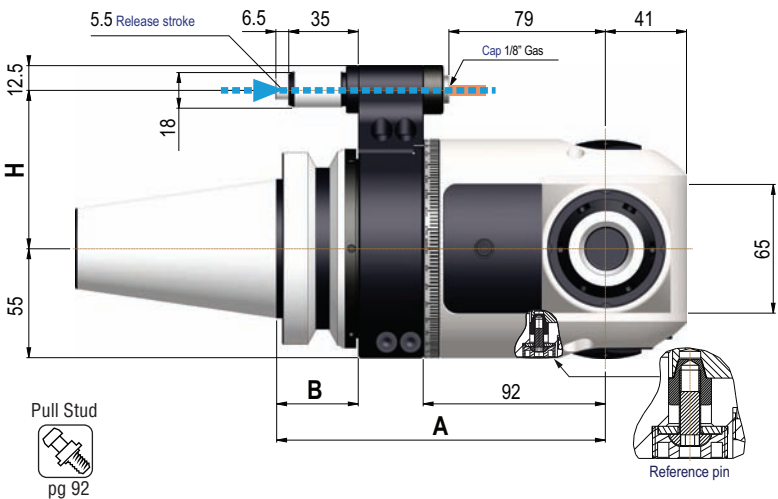
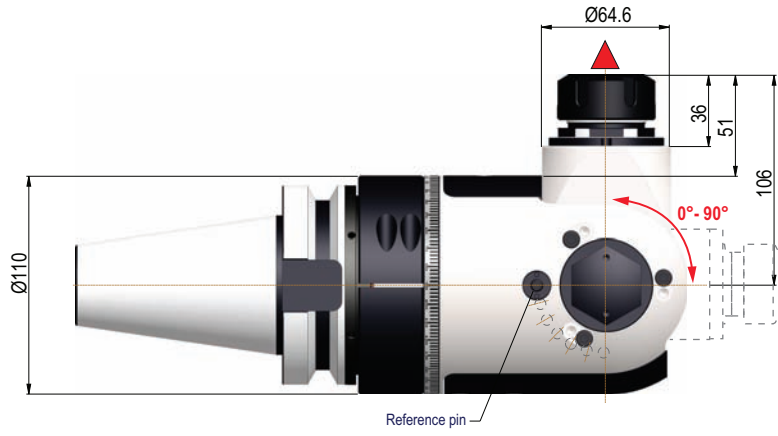
- Internal coolant from positioning pin
- Internal air pressure
- Retaining block
- Wrenches
- Grease tube
- Instruction book & Inspection report



ATC PIVOTING ANGLE HEADS

MADE IN ITALY 

GPV20



Pull Stud
pg 92



▼ Direction of rotation is opposite to the machine spindle

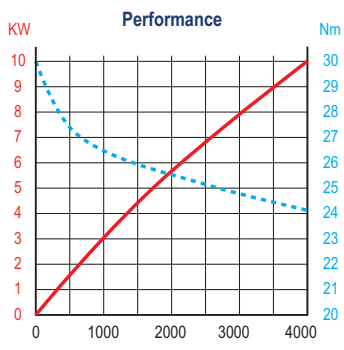
GPV20 ER 32 Pivoting Angle Heads

Taper	Model	Collet System	A (mm)	B (mm)	H (mm)	End Mill & Drill Cap. (mm)	Tap Size Capacity	Max R.P.M.	Weight (Kg.)	Code No.
CAT 50	GPV20	ER 32	160	35	80 (110)*	20	M16	4,000	13	381-150
BT 50	GPV20	ER 32	166	41	80 (110)*	20	M16	4,000	13	381-154
HSK100	GPV20	ER 32	170	45	80 (110)*	20	M16	4,000	13	381-158

Other tapers available please inquire

() * Optional

Technical Data		GPV20
Ratio		1:1
RPM Max	g/min	4,000
Max axial load	N	715
Torque	Nm	32
Weight	Kg.	13
Collet	mm	ER-32 3mm-20mm



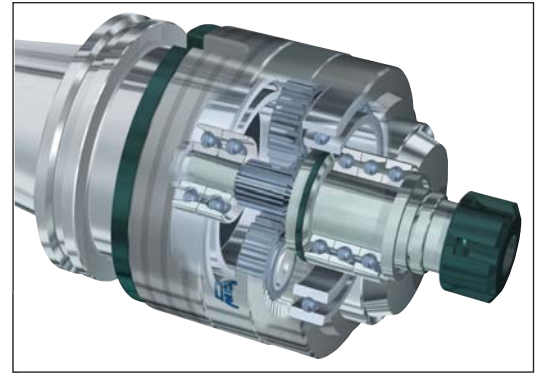
Standard Features & Equipment Included:

- Internal coolant from positioning pin
- Internal air pressure
- Retaining block
- Wrenches
- Grease tube
- Instruction book & Inspection report



Spindle Speeders

MADE IN ITALY 



These Spindle Speeders have been designed and developed to offer a product that ensures maximum reliability and precision in milling and drilling. From design to static and dynamic testing of the finished product.

- **Max. 22,000 continuous revs (higher ratings on request)**
- **Used in particular for finishing operations**
- **Manual or automatic mounting option**
- **Allow the machine to rotate at low rpm**
- **Possibility of using hard metal tools**

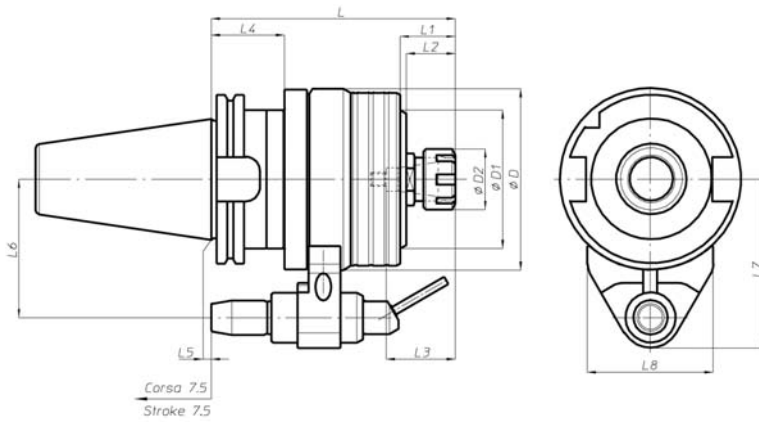
The compact construction, the heat-treated steel parts and the ground gears on the involute guarantee transmission of high power ratings with amazingly low noise levels. The spindle is supported by a set of preloaded precision ball bearings with oblique contact that ensure greater strength and rotation precision within 0.01 mm.

- **Two or three planetary gears for high transmission power ratings**
- **Special tool attachment on request (Komet, DIN 1835, etc.)**
- **Coolant through the tool centre, on request**
- **Machine connection, on request (Morse Cone, DIN 69880 etc.)**
- **Interchangeable anti-rotation pin which can therefore be customized by the buyer**
- **Can be mounted on traditional machines and on machines with automatic tool change.**
- **Lubricated with a long-life synthetic grease that is practically maintenance free.**

The test certificate attached to each Spindle Speeder guarantees the quality of the product.

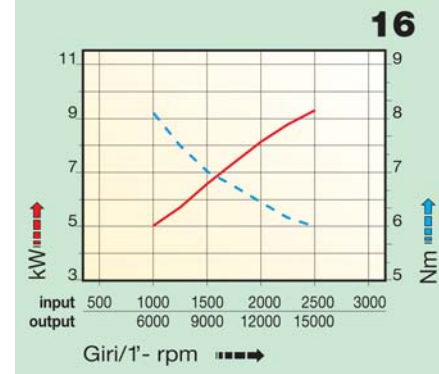
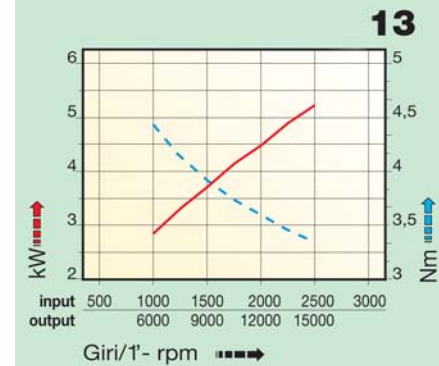
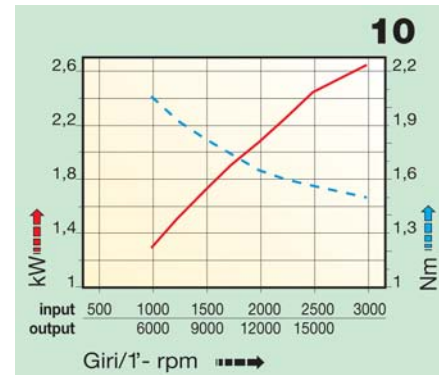
CAT TAPER SPINDLE SPEEDERS

MADE IN ITALY



Modello Type	10				13			16	
Cono Shank DIN	30	40	45	50	40	45	50	45	50
Cono Shank CAT	40	50	40	50	50				
Rapporto Ratio	1 - 6				1 - 6			1 - 6	
N. giri max RPM	22.000 *				15.000 *			12.000 *	
Peso Weight	3,3	3,7	4,3	6,5	5,8	6,7	8	9	10
Pinza Collet	ER 16 max Ø 10				ER 20 max Ø 13			ER 25 max Ø 16	
D	84				105			123	
D1	65				80			100	
D2	24				35			42	
L	132				141,5			155,5	
L1	32				32			34	
L2	28				28,5			29	
L3	36,5				40			43	
L4	35	35	42	35	42				
L5	0				0			0	
L6	65	80	80	80					
L7	82,5	97,5	97,5	97,5					
L8	71				73			75	
Forza assiale Axial thrust	60 daN				90 daN			110 daN	

* n° giri max per lavorazioni continuative
speed at 100% duty cycle

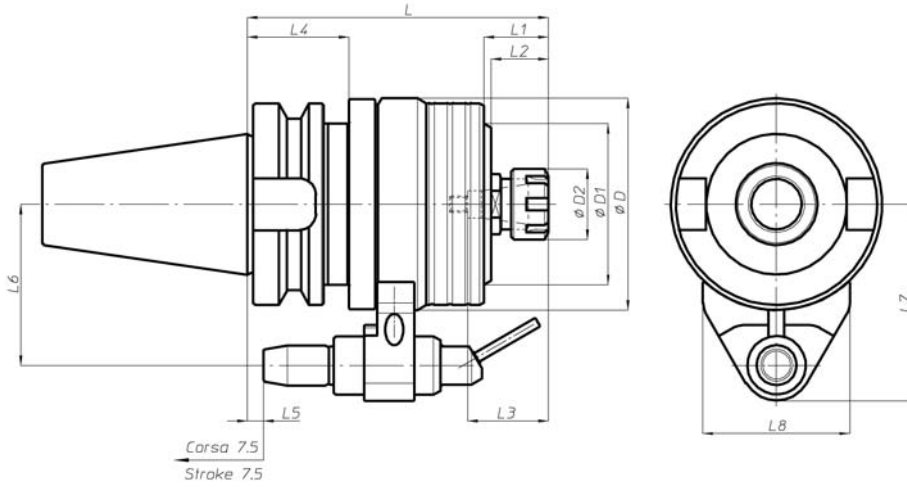


CAT Taper Spindle Speeders

Series	CAT 40 Code No.	CAT 50 Code No.
CT10/ER16	384-214	384-216
CT13/ER20	384-218	384-220
CT16/ER25		384-222

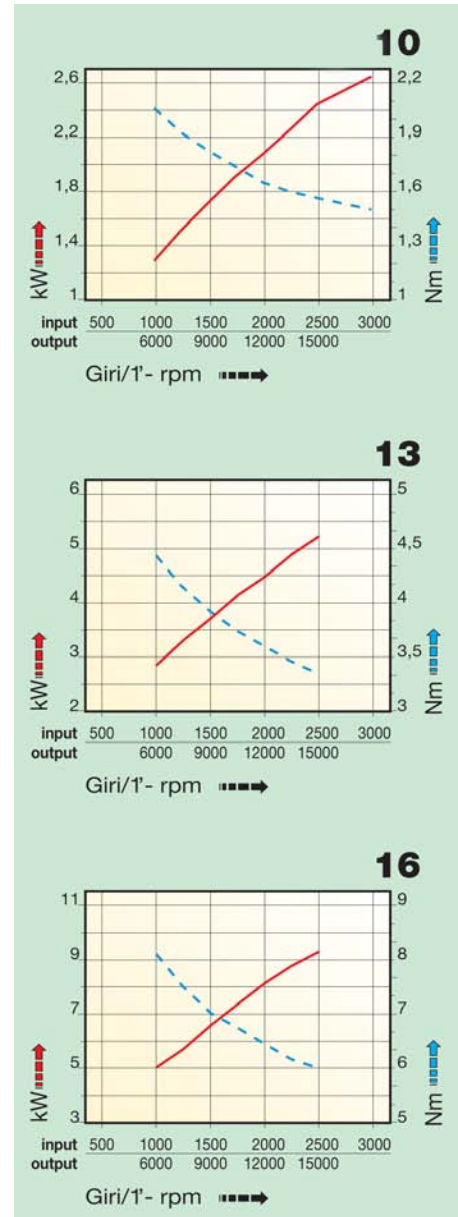
BT TAPER SPINDLE SPEEDERS

MADE IN ITALY



Modello Type	10			13		16	
Cono Shank	30	40	50	40	50	50	
Rapporto Ratio	1 - 6			1 - 6		1 - 6	
N. giri max RPM	22.000 *			15.000 *		12.000 *	
Peso Weight	3,3	3,7	6,5	5,8	8	10	
Pinza Collet	ER 16 max Ø 10			ER 20 max Ø 13		ER 25 max Ø 16	
D	84			105		123	
D1	65			80		100	
D2	24			35		42	
L	132	132	40	141,5	149,5	163,5	
L1	32			32		34	
L2	28			28,5		29	
L3	36,5			40		43	
L4	42,5	42,5	50,5	34,5	50,5	41	
L5	0		8	0		8	7,5
L6	65		80	80		80	
L7	82,5		97,5	97,5		97,5	
L8	71			73		75	
Forza assiale Axial thrust	60 daN			90 daN		110 daN	

* n° giri max per lavorazioni continuative speed at 100% duty cycle

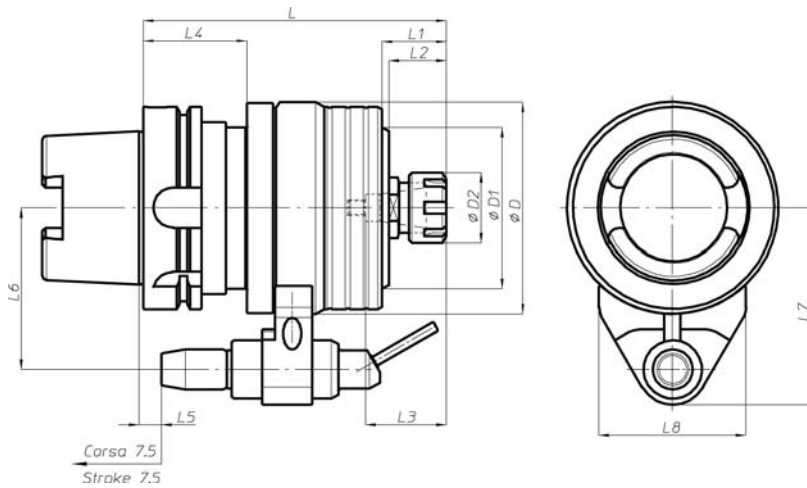


BT Taper Spindle Speeders

Series	BT 40 Code No.	BT 50 Code No.
BT10/ER16	384-236	384-238
BT13/ER20	384-240	384-242
BT16/ER25		384-244

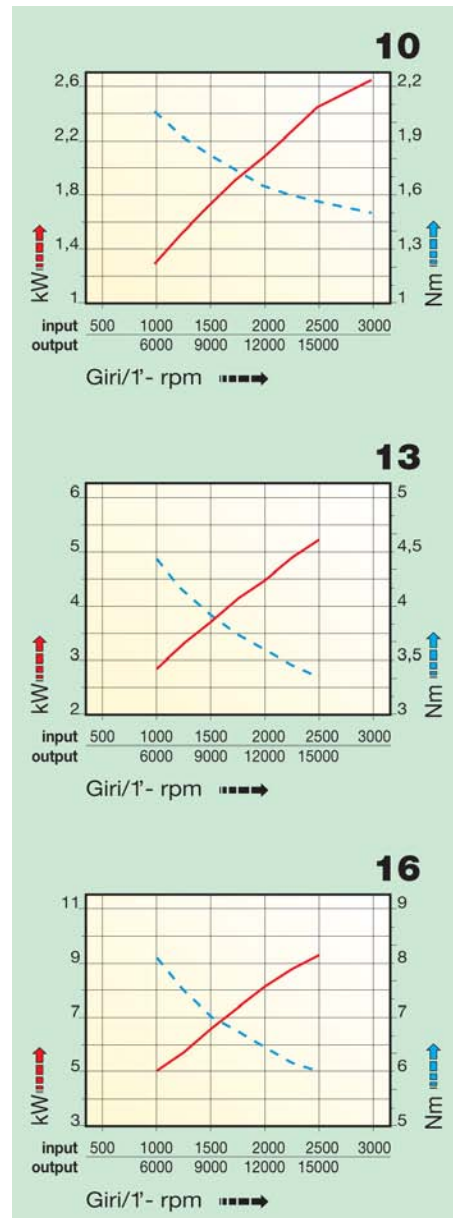
HSK TAPER SPINDLE SPEEDERS

MADE IN ITALY



Modello Type	10			13			16		
Cono Shank	63	80	100	63	80	100	80	100	
Rapporto Ratio	1 - 6			1 - 6			1 - 6		
N. giri max RPM	22.000 *			15.000 *			12.000 *		
Peso Weight	3,3	3,7	6,5	5,8	8		10		
Pinza Collet	ER 16 max Ø 10			ER 20 max Ø 13			ER 25 max Ø 16		
D	84			105			123		
D1	65			80			85		
D2	24			35			42		
L	141			150,5			164,5		
L1	32			32			44		
L2	28			28,5			32,5		
L3	36,5			40			52		
L4	42			42	51,5		56		
L5	9			9			8,5		
L6	65	80		80			80		
L7	82,5	97,5		97,5			97,5		
L8	71			73			75		
Forza assiale Axial thrust	60 daN			90 daN			110 daN		

* n° giri max per lavorazioni continuative
speed at 100% duty cycle

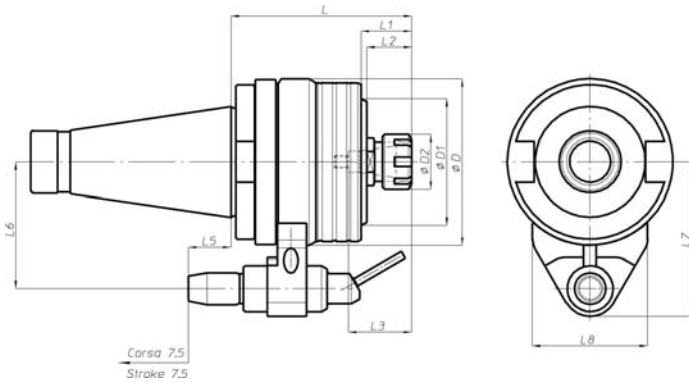


HSK Spindle Speeders

Series	HSK 63 Code No.	HSK 80 Code No.	HSK 100 Code No.
HSK10/ER16	384-246	384-248	384-250
HSK13/ER20	384-252	384-254	384-256
HSK16/ER25		384-258	384-260

NMTB TAPER SPINDLE SPEEDERS

MADE IN ITALY

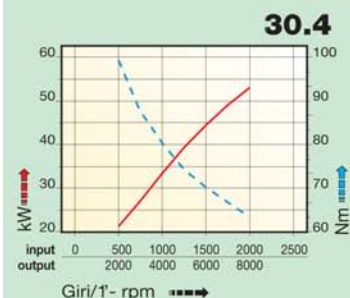
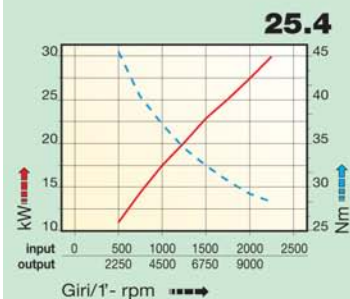
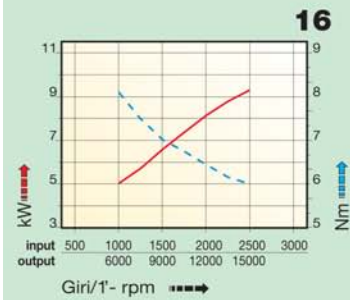
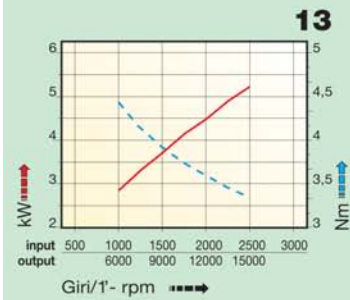
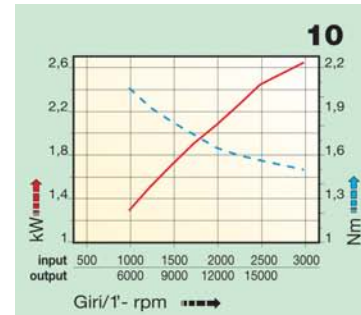


Modello Type	10			13			16			25.4		30.4		
Cono Shank DIN	40	45	50	40	45	50	40	45	50	50		50		
Cono Shank NMTB	40	50	40	50	50			50		50				
Rapporto Ratio	1 - 6			1 - 6			1 - 6			1 - 4,5		1 - 4		
N. giri max RPM	22.000 *			15.000 *			12.000 *			10.000 *		8.000 *		
Peso Weight	3	3	4,8	6,3	5	6	7,3	7,4	8	9,3	20		30	
Pinza Collet	ER 16 max Ø 10			ER 20 max Ø 13			ER 25 max Ø 16			ER 40 max Ø 30		ER 50 max Ø 34		
D	84			105			123			169		185		
D1	65			80			100			120		114		
D2	24			35			42			63		78		
L	110	102	105	105	111	114,5	125	128,5	184,5		236			
L1	32			32			34			67,5		85,5		
L2	28			28,5			29			40,5		60,5		
L3	36,5			40			43			64		90		
L5	14,5	11,5	13	9,5	15	12	12		12		12			
L6	65	80	80	80	80			110		110				
L7	82,5	97,5	97,5	97,5	97,5			127,5		127,5				
L8	71			73			75			75		75		
Forza assiale Axial thrust	60 daN			90 daN			110 daN			300 daN		400 daN		

* n° giri max per lavorazioni continuative
speed at 100% duty cycle

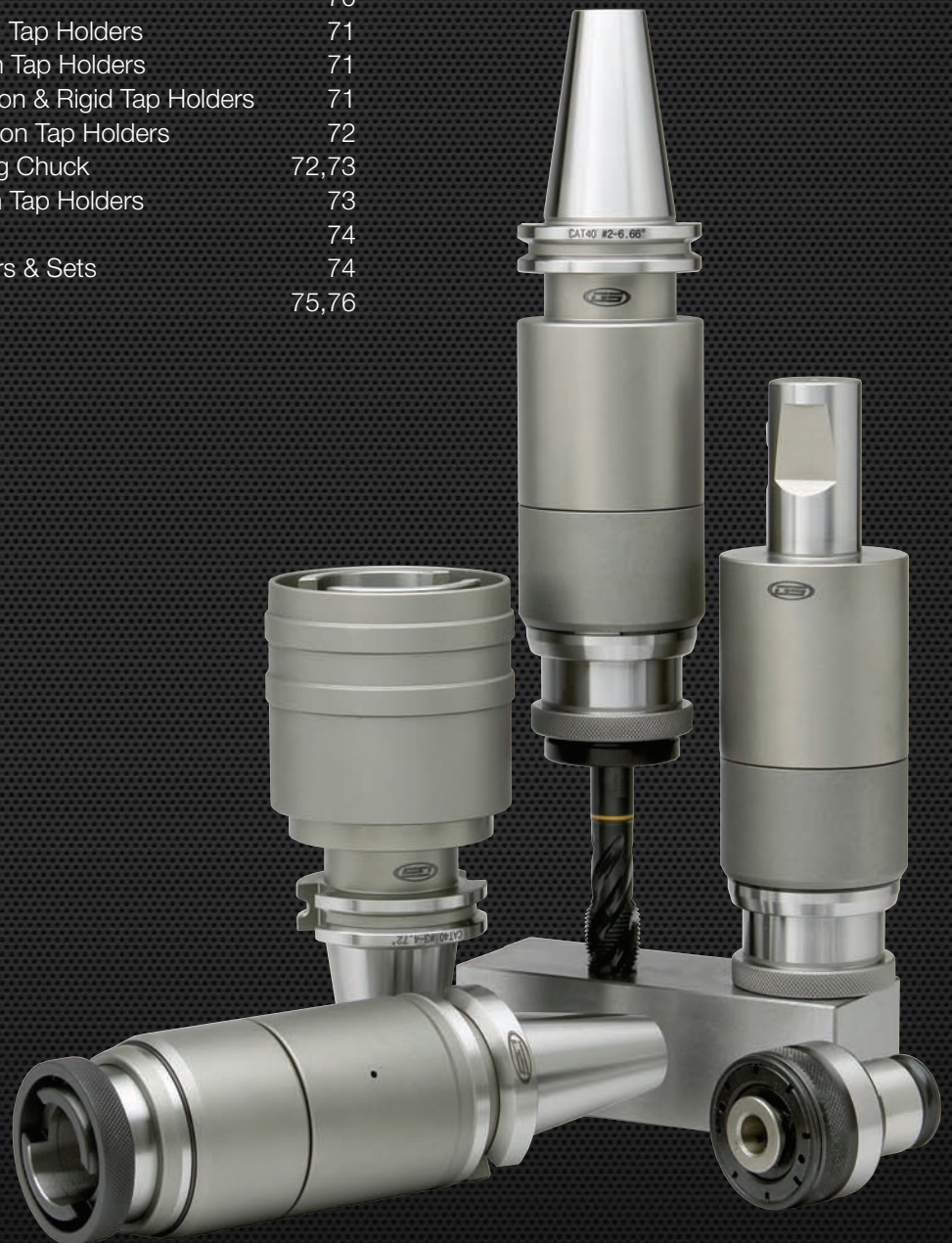
NMTB Taper Spindle Speeders

Series	NMTB 40 Code No.	NMTB 50 Code No.
NMTB-10/ER16	384-224	384-226
NMTB-13/ER20	384-228	384-230
NMTB-16/ER25		384-232
NMTB-30/ER50		384-234



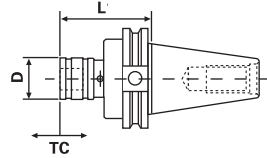
TAPPING CHUCKS & COLLETS

CAT Taper Tension/Compression Tap Holders	70
CAT Taper Rigid Tap Holders	70
BT Taper Tension/Compression Tap Holders	70
BT Taper Rigid Tap Holders	70
HSK Tension/Compression & Rigid Tap Holders	71
NMTB Taper Tension/Compression Tap Holders	71
Weldon Shank Tension/Compression & Rigid Tap Holders	71
Straight Shank Tension/Compression Tap Holders	72
Straight Shank T/C & Rigid Tapping Chuck	72,73
Morse Taper Tension/Compression Tap Holders	73
Torque Control Tap Collets & Sets	74
Positive Drive Tap Collets, Reducers & Sets	74
Synchrolize Tapping System	75,76



CAT Taper Tension/Compression Tap Holders

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

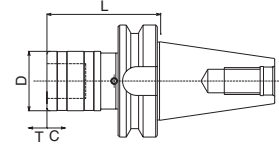


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Collets pg 74

Taper	Tap Range Hand	Tap Range Pipe	System	L (in.)	D (in.)	T/C (in.)	Code No.
CAT40							
CT40	#0-9/16	1/8	#1	2.93	1.43	0.29/0.29	531-543
CT40	#0-9/16	1/8	#1	4.00	1.43	0.29/0.29	531-540
CT40	#0-9/16	1/8	#1	4.47	1.25	0.79/0.39	531-542
CT40	5/16-7/8	1/4-1/2	#2	4.50	2.09	0.49/0.49	531-544
CT40	5/16-7/8	1/4-1/2	#2	6.66	2.00	0.85/0.49	531-546
CT40	13/16-1-3/8	3/4-1	#3	5.75	3.07	0.79/0.79	531-549
CT40	13/16-1-3/8	3/4-1	#3	8.00	3.07	0.79/0.79	531-548
CT40	13/16-1-3/8	3/4-1	#3	9.19	2.87	0.98/0.59	531-550
CAT50							
CT50	#0-9/16	1/8	#1	4.00	1.43	0.29/0.29	531-552
CT50	#0-9/16	1/8	#1	5.02	1.25	0.79/0.39	531-554
CT50	5/16-7/8	1/4-1/2	#2	4.50	2.09	0.49/0.49	531-556
CT50	5/16-7/8	1/4-1/2	#2	5.66	2.00	0.85/0.49	531-558
CT50	13/16-1-3/8	3/4-1	#3	6.25	3.07	0.79/0.79	531-560
CT50	13/16-1-3/8	3/4-1	#3	7.72	2.87	0.98/0.59	531-562

BT Taper Tension/Compression Tap Holders

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

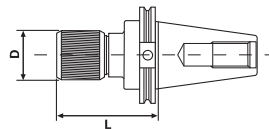


Pull Stud pg 92
Collets pg 74

Taper	Tap Range Hand	Tap Range Pipe	System	L (in.)	D (in.)	T/C (in.)	Code No.
BT30							
BT30	#0-9/16	1/8	#1	2.40	1.43	0.29/0.29	532-261
BT30	#0-9/16	1/8	#1	4.25	1.43	0.29/0.29	532-260
BT30	#0-9/16	1/8	#1	4.92	1.25	0.79/0.39	532-262
BT40							
BT40	#0-9/16	1/8	#1	2.62	1.43	0.29/0.29	532-267
BT40	#0-9/16	1/8	#1	3.80	1.43	0.29/0.29	532-264
BT40	#0-9/16	1/8	#1	4.33	1.25	0.79/0.39	532-266
BT40	5/16-7/8"	1/4-1/2	#2	4.50	2.09	0.49/0.49	532-268
BT40	5/16-7/8	1/4-1/2	#2	6.34	2.00	0.85/0.49	532-270
BT40	13/16-1-3/8	3/4-1	#3	7.50	3.07	0.79/0.79	532-272
BT40	13/16-1-3/8	3/4-1	#3	9.00	2.87	0.98/0.59	532-274
BT50							
BT50	#0-9/16	1/8	#1	4.33	1.25	0.79/0.39	532-275
BT50	5/16-7/8	1/4-1/2	#2	6.34	2.00	0.85/0.49	532-277
BT50	13/16-1-3/8	3/4-1	#3	7.50	3.07	0.79/0.79	532-279

CAT Taper Rigid Tap Holders

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

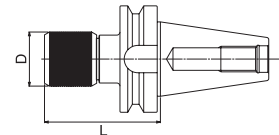


Pull Stud pg 92
Collets pg 74

Taper	Tap Range Hand	Tap Range Pipe	System	L (in.)	D (in.)	Code No.
CAT40						
CT40	#0-9/16"	1/8"	#1	3.02"	1.25"	531-564
CT40	5/16-7/8"	1/4-1/2"	#2	3.66"	2.00"	531-566
CT40	13/16-1-3/8"	3/4-1"	#3	4.72"	2.87"	531-568
CAT50						
CT50	#0-9/16"	1/8"	#1	3.02"	1.25"	531-570
CT50	5/16-7/8"	1/4-1/2"	#2	3.91"	2.00"	531-572
CT50	13/16-1-3/8"	3/4-1"	#3	4.98"	2.87"	531-574

BT Taper Rigid Tap Holders

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

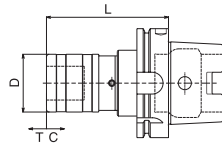


Pull Stud pg 92
Collets pg 74

Taper	Tap Range Hand	Tap Range Pipe	System	L (in.)	D (in.)	Code No.
BT30						
BT30	#0-9/16"	1/8"	#1	2.44"	1.25"	532-276
BT40						
BT40	#0-9/16"	1/8"	#1	3.02"	1.25"	532-278
BT40	5/16-7/8"	1/4-1/2"	#2	3.66"	2.00"	532-280
BT40	13/16-1-3/8"	3/4-1"	#3	4.73"	2.87"	532-282
BT50						
BT50	#0-9/16"	1/8"	#1	3.02"	1.25"	532-281
BT50	5/16-7/8"	1/4-1/2"	#2	3.66"	2.00"	532-283
BT50	13/16-1-3/8"	3/4-1"	#3	4.73"	2.87"	532-284

HSK Tension/Compression Tap Holders

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



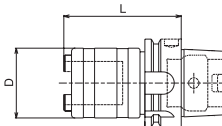
Collets



Taper	Tap Range Hand	Tap Range Pipe	System	L (in.)	D (in.)	T/C (in.)	Code No.
HSK63							
HSK63	#0-9/16	1/8	#1	5.30	1.43	0.29/0.29	536-196
HSK63	5/16-7/8	1/4-1/2	#2	6.10	2.09	0.49/0.49	536-198
HSK63	13/16-1-3/8	1/2-1	#3	8.66	3.07	0.79/0.79	536-200
HSK100							
HSK100	#0-9/16	1/8	#1	5.30	1.43	0.29/0.29	536-202
HSK100	5/16-7/8	1/4-1/2	#2	6.30	2.09	0.49/0.49	536-204
HSK100	13/16-1-3/8	3/4-1	#3	8.00	3.07	0.79/0.79	536-206

HSK Rigid Tap Holders

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

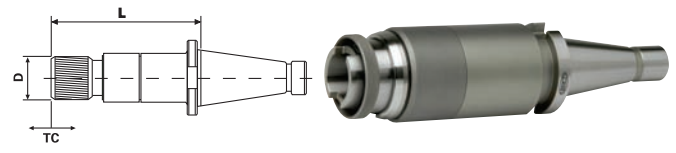


Collets



Taper	Tap Range Hand	Tap Range Pipe	System	L (in.)	D (in.)	Code No.
HSK63						
HSK63	#0-9/16"	1/8"	#1	3.34"	1.26"	536-184
HSK63	5/16-7/8"	1/4-1/2"	#2	4.00"	1.97"	536-186
HSK63	13/16-1-3/8"	1/2-1"	#3	5.00"	2.83"	536-188
HSK100						
HSK100	#0-9/16"	1/8"	#1	3.54"	1.43"	536-190
HSK100	5/16-7/8"	1/4-1/2"	#2	3.74"	2.09"	536-192
HSK100	13/16-1-3/8"	3/4-1"	#3	5.00"	3.07"	536-194

NMTB Taper Tension/Compression Tap Holders



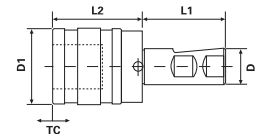
Collets



Taper	Tap Range Hand	Tap Range Pipe	System	L (in.)	D (in.)	T/C (in.)	Code No.
NMTB40							
NMTB40	#0-9/16	1/8	#1	3.90	1.25	0.79/0.39	534-500
NMTB40	5/16-7/8	1/4-1/2	#2	6.16	2.00	0.85/0.49	534-502
NMTB50							
NMTB50	#0-9/16	1/8	#1	4.50	1.25	0.79/0.39	534-504
NMTB50	5/16-7/8	1/4-1/2	#2	7.00	2.00	0.85/0.49	534-506
NMTB50	13/16-1-3/8	3/4-1	#3	7.73	2.87	0.98/0.59	534-508

Weldon Shank Tension/Compression Tap Holders

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



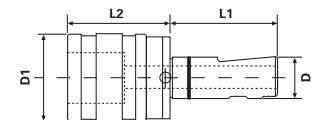
Collets



Tap Range Hand	Tap Range Pipe	System	Shank Dia. D	D1	L1	L2	T/C	Code No.
#0-9/16	1/8	#1	1	1.25	2.28	4.13	0.79/0.39	534-520
#0-9/16	1/8	#1	1	1.43	2.28	1.53	0.29/0.29	534-522
#0-9/16	1/8	#1	1-1/4	1.25	2.28	4.13	0.79/0.39	534-528
5/16-7/8	1/4-1/2	#2	1-1/4	2.00	2.28	5.55	0.85/0.49	534-530
#0-9/16	1/8	#1	1-1/2	1.25	2.69	4.13	0.79/0.39	534-532
5/16-7/8	1/4-1/2	#2	1-1/2	2.00	2.69	5.55	0.85/0.49	534-534
13/16-1-3/8	3/4-1	#3	1-1/2	3.07	2.69	3.86	0.79/0.79	534-538

Weldon Shank Rigid Tap Holders

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



Collets

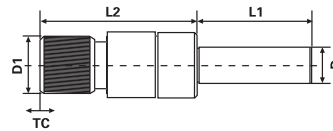


Tap Range Hand	Tap Range Pipe	System	Shank Dia. D	D1	L1	L2	Code No.
#0-9/16"	1/8"	#1	1"	1.26"	2.28"	1.46"	534-540
5/16-7/8"	1/4-1/2"	#2	1"	1.97"	2.28"	2.12"	534-542
13/16-1-3/8"	3/4-1"	#3	1-1/2"	2.83"	2.69"	3.27"	534-544

Straight Shank Tension/Compression Tap Holders



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



Collets



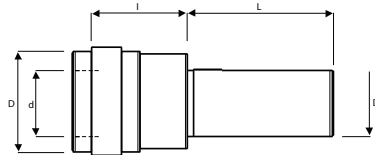
pg 74

Tap Range Hand	Tap Range Pipe	System	Shank Dia. D	D1	L1	L2	T/C	Code No.
#0-9/16	1/8	#1	1	1.25	3.50	4.13	0.79/0.39	534-510
5/16-7/8	1/4-1/2	#2	1	2.00	3.50	5.55	0.85/0.49	534-512
#0-9/16	1/8	#1	1-1/4	1.25	4.00	4.13	0.79/0.39	534-514
5/16-7/8	1/4-1/2	#2	1-1/4	2.00	4.00	5.55	0.85/0.49	534-516

Straight Shank Tension/Compression Tapping Chuck



- Precision ground surfaces
- Compact length
- Provides axial float
- Plastic collar to protect chuck from coolant
- Roller cage construction
- Adjustable entry force



Collets



pg 74

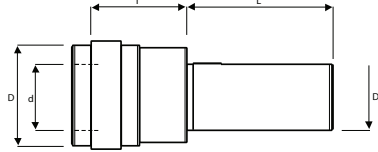
Description	System	Shank D1	d	D	I	L	Tap Capacity	Tension & Compression		Code No.
								T	C	
1" shank	#1	1.00	.748	1.50	1.76	1.95	#0 - 9/16"	.35	.35	339-100
1" shank	#2	1.00	1.220	2.17	2.52	2.00	5/16 - 7/8"	.59	.59	339-105
1-1/2" shank	#2	1.50	1.220	2.17	2.52	3.50	5/16 - 7/8"	.59	.59	339-110
1-1/2" shank	#3	1.50	1.890	3.09	3.85	3.50	13/16 - 1-3/8"	.94	.94	339-115

Straight Shank Rigid Tapping Chuck



- Precision ground surfaces
- Compact length
- No float for synchronous tapping
- Coolant through spindle capability

Collets
 pg 74

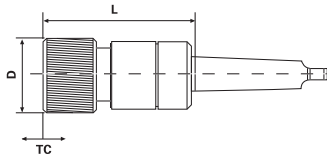


Description	System	Shank D1	d	D	l	L	Tap Capacity	Code No.
1" shank	#1	1.00	.748	1.30	1.60	1.95	#0 - 9/16"	339-120
1" shank	#2	1.00	1.220	2.00	2.50	2.00	5/16 - 7/8"	339-125
1-1/2" shank	#3	1.50	1.890	2.84	3.44	3.50	13/16 - 1-3/8"	339-130

Morse Taper Tension/Compression Tap Holders



Collets
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Morse Taper	Tap Range Hand	Tap Range Pipe	System	D (in.)	L (in.)	T/C (in.)	Code No.
2	#0-9/16	1/8	#1	1.25	5.725	0.79/0.39	534-546
2	5/16-7/8	1/4-1/2	#2	2.00	7.00	0.85/0.49	534-548
3	#0-9/16	1/8	#1	1.25	4.750	0.79/0.39	534-550
3	5/16-7/8	1/4-1/2	#2	2.00	5.870	0.85/0.49	534-552
4	#0-9/16	1/8	#1	1.25	4.72	0.79/0.39	534-554
4	5/16-7/8	1/4-1/2	#2	2.00	5.94	0.85/0.49	534-556

Torque Control Tap Collets & Sets

Tap System #1

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



Tap System #2

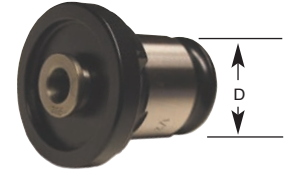
- Tap Collets are fully compatible with Bilz System #2. Size Range: 5/16"-7/8" hand tap and 1/4"-1/2" pipe tap

Tap Size	Tap System	D	Tap Shank	Square	Code No.
#0-#6	1	.748	0.141	0.110	337-260
#8	1	.748	0.168	0.131	337-261
#10	1	.748	0.194	0.152	337-262
#12	1	.748	0.220	0.165	337-263
1/4	1	.748	0.255	0.191	337-264
5/16	1	.748	0.318	0.238	337-265
3/8	1	.748	0.381	0.286	337-266
7/16	1	.748	0.323	0.110	337-267
1/2	1	.748	0.367	0.110	337-268
9/16	1	.748	0.429	0.332	337-269
NPT 1/8P	1	.748	0.313	0.234	337-270
5/16	2	1.220	0.318	0.238	337-275
3/8	2	1.220	0.381	0.286	337-276
7/16	2	1.220	0.323	0.242	337-277
1/2	2	1.220	0.367	0.275	337-278
9/16	2	1.220	0.429	0.322	337-279
5/8	2	1.220	0.480	0.360	337-280
11/16	2	1.220	0.542	0.406	337-281
3/4	2	1.220	0.590	0.442	337-282
13/16	2	1.220	0.652	0.489	337-283
7/8	2	1.220	0.697	0.523	337-284
NPT					
1/4P	2	1.220	0.562	0.421	337-285
3/8P	2	1.220	0.700	0.531	337-286
1/2P	2	1.220	0.687	0.515	337-287
Sets					
Type #1 - 11 pc#0-9/16, 1/8NPT				337-271	
Type #2 - 13 pc5/16-7/8, 1/4, 3/8, 1/2 NPT					337-288

Positive Drive Tap Collets, Reducers & Sets

Tap System #1

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



Tap System #2

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

Tap System #3

- Tap Collets are fully compatible with Bilz System #3. Size Range: 13/16" - 1-3/8" hand tap and 3/4" - 1" pipe tap

Tap Size	Tap System	D	Tap Shank	Square	Code No.
#0-#6	1	.748	0.141	0.110	337-052
#8	1	.748	0.168	0.131	337-054
#10	1	.748	0.194	0.152	337-056
#12	1	.748	0.220	0.165	337-058
1/4	1	.748	0.255	0.191	337-060
5/16	1	.748	0.318	0.238	337-062
3/8	1	.748	0.381	0.286	337-064
7/16	1	.748	0.323	0.242	337-066
1/2	1	.748	0.367	0.275	337-068
9/16	1	.748	0.429	0.322	337-070
NPT 1/8P	1	.748	0.313	0.234	337-072
5/16	2	1.220	0.318	0.238	337-074
3/8	2	1.220	0.381	0.286	337-076
7/16	2	1.220	0.323	0.242	337-078
1/2	2	1.220	0.367	0.275	337-080
9/16	2	1.220	0.429	0.322	337-082
5/8	2	1.220	0.480	0.360	337-084
11/16	2	1.220	0.542	0.406	337-086
3/4	2	1.220	0.590	0.442	337-088
13/16	2	1.220	0.652	0.489	337-090
7/8	2	1.220	0.697	0.523	337-092
NPT					
1/4P	2	1.220	0.562	0.421	337-094
3/8P	2	1.220	0.700	0.531	337-096
1/2P	2	1.220	0.687	0.515	337-098
13/16	3	1.891	0.652	0.489	337-100
7/8	3	1.891	0.697	0.523	337-102
15/16	3	1.891	0.760	0.570	337-104
1	3	1.891	0.800	0.600	337-106
1-1/8	3	1.891	0.896	0.672	337-108
1-1/4	3	1.891	1.021	0.766	337-110
1-3/8	3	1.891	1.108	0.831	337-112
NPT					
3/4P	3	1.891	0.906	0.679	337-114
1P	3	1.891	1.125	0.843	337-116
Reducers					
Type #2 - #1					337-118
Type #3 - #2					337-119
Sets					
Type #1 - 11 pc#0-9/16, 1/8NPT					337-073
Type #2 - 13 pc5/16-7/8, 1/4, 3/8, 1/2 NPT					337-099
Type #3 - 9 pc13/16-1-3/8, 3/4, 1" NPT					337-117

SYNCHROLIZE TAPPING SYSTEM FOR RIGID TAPPING

Features:

- The Synchrolize tapping chuck is the better solution, it gives you the possibility to work with axial compensation
- Tap capacity: M3-M12, M6-M20, M14-M33
- Triple life of tap in comparison to a traditional tapping system
- Quick change of the tap and of the adapter
- Suitable for rigid tapping with micro compensation
- Uses ER Tap Collets full and free.



- Up to 9" of gauge length can be obtained when using the extension system
- No need for tap collets due to the opposing set screws in the tap adapters

CAT Taper Synchrolize Tap Chucks

- Slim nose Design
- Up to 200% increase in tap life

Pull Stud



pg 92



Taper	Tap Range Hand	System	Nose Dia. (in.)	Gauge Length (in.)	Code No.
40	#0 - 1/2"	1	1.693	2.087	531-610
40	3/8" - 3/4"	2	2.323	2.874	531-614
50	#0 - 1/2"	1	1.690	2.402	531-612
50	3/8" - 3/4"	2	2.323	2.874	531-616

BT Taper Synchrolize Tap Chucks

- Slim nose Design
- Up to 200% increase in tap life

Pull Stud



pg 92



Taper	Tap Range Hand	System	Nose Dia. (in.)	Gauge Length (in.)	Code No.
40	#0 - 1/2"	1	1.690	2.402	532-310

HSK Synchrolize Tap Chucks

- Slim nose Design
- Up to 200% increase in tap life



Taper	Tap Range Hand	System	Nose Dia. (in.)	Gauge Length (in.)	Code No.
HSK50A	#0 - 1/2"	1	1.693	2.756	536-210
HSK50A	3/8" - 3/4"	2	2.362	3.819	536-218
HSK63A	#0 - 1/2"	1	1.693	2.520	536-212
HSK63A	3/8" - 3/4"	2	2.362	3.819	536-214
HSK100A	3/8" - 3/4"	2	2.362	3.583	536-216

Synchrolize Quick Change Tap Adapters

- Opposing set screws to secure tap, NO NEED for Tap Collets
- Designed for perfect hole alignment



System	Tap Range	Collet Style	Length	Nose Dia.	Code No.
1	#0 - 1/2"	ER16	24mm	28mm	338-120
2	3/8" - 3/4"	ER25	28mm	42mm	338-122
3	9/16" - 1-5/16"	ER40	32mm	63mm	338-124

Synchrolize Quick Change Tap Adapters - Extended

- Opposing set screws to secure tap, NO NEED for Tap Collets
- Designed for perfect hole alignment



System	Tap Range	Collet Style	L	Nose Dia.	Code No.
1	#0 - 1/2"	ER16	55mm	28mm	338-126
2	3/8" - 3/4"	ER25	86mm	42mm	338-128
3	9/16" - 1-5/16"	ER40	95mm	63mm	338-130

- See page 23 for ER16 Tap Collets
- See page 24 for ER25 Tap Collets
- See page 26 for ER40 Tap Collets

SYNCHROLIZE EXTENSION SYSTEM



Up to 9" of gauge length

Synchronize Tap Adapter Bodies



System	Length Added	Code No.
1	5mm	338-132
2	7mm	338-134
3	2mm	338-136

Synchronize Extensions



System	Length	Code No.
1	25mm	338-144
1	50mm	338-146
2	50mm	338-148
2	100mm	338-150
3	50mm	338-152
3	100mm	338-154

Synchronize Terminals



System	Tap Range	Collet Style	Length	Code No.
1	#0 - 1/2"	ER16	50mm	338-138
2	3/8" - 3/4"	ER25	79mm	338-140
3	9/16" - 1-5/16"	ER40	93mm	338-142

Synchronize Assembly Supports



System	Code No.
1	338-156
2	338-158
3	338-160

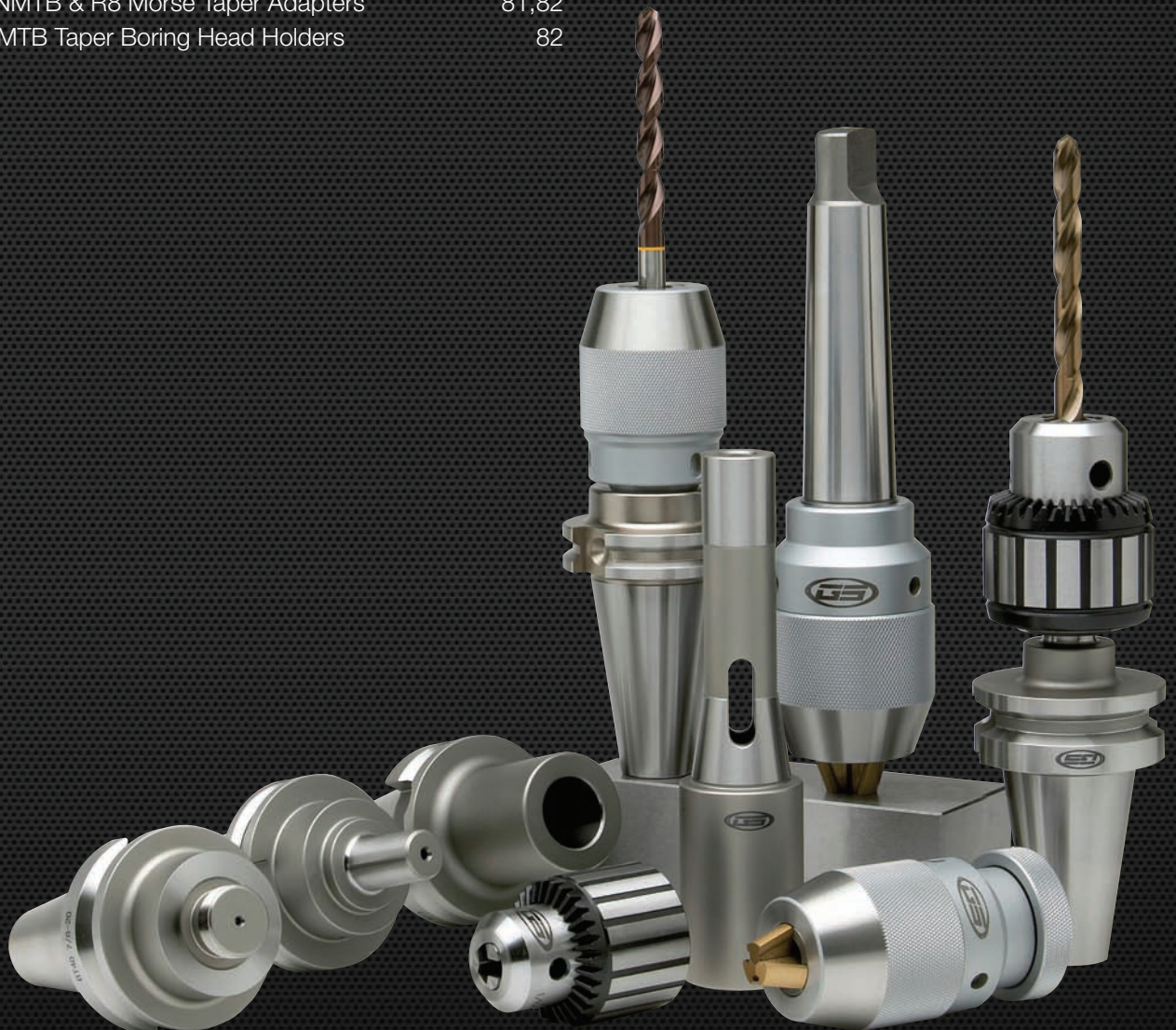
- See page 23 for ER16 Tap Collets
- See page 24 for ER25 Tap Collets
- See page 26 for ER40 Tap Collets



TOOLING

DRILL CHUCKS & TAPER ADAPTERS

CAT Taper Integral Keyless Drill Chucks	78
BT Taper Integral Keyless Drill Chucks	78
NMTB Taper Integral Keyless Drill Chucks	79
M.T., R8 & Straight Shank Integral Keyless Drill Chucks	79
Replacement Drill Chucks & Wrenches	79
Ball/Plain Bearing & Keyless Drill Chucks	80
CAT, BT, NMTB & R8 Jacobs Taper Adapters	81
CAT, BT, NMTB & R8 Morse Taper Adapters	81,82
CT, BT, NMTB Taper Boring Head Holders	82





DRILL CHUCKS

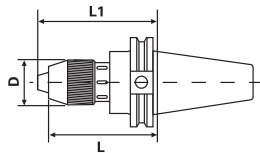
- **HIGH PRECISION**
- **PREMIUM TOLERANCE**
- **TIN COATED JAWS FOR IMPROVED LIFE**
- **GS Keyless Drill Chucks designed to achieve the highest accuracy and rigidity possible**
- **GS Super Heavy Duty Ball Bearing Drill Chucks are made to the highest tolerances in the market**



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 assures separation safety

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



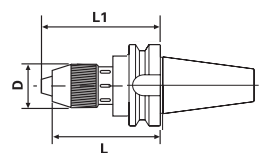
- Pull Stud**
 pg 92
- Wrench**
 pg 79
- Replacement Drill Chuck**
 pg

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

BT 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 assures separation safety

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



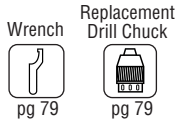
- Pull Stud**
 pg 92
- Wrench**
 pg 79
- Replacement Drill Chuck**
 pg 79

Taper	Cap.	L	L1	D	Code No.
BT30					
BT30	1/4"	2.76"	3.00"	1.34"	532-210
BT30	1/2"	3.53"	3.98"	1.97"	532-212
BT40					
BT40	1/4"	2.96"	3.19"	1.34"	532-214
BT40	1/2"	3.73"	4.18"	1.97"	532-216
BT50					
BT50	1/2"	4.35"	4.85"	2.00"	532-217
BT50	5/8"	5.03"	5.50"	2.25"	532-219

NMTB 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 assures separation safety

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

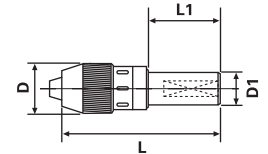
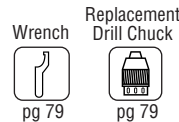


Taper	Cap.	Gauge Length (Open)	Gauge Length (Closed)	Chuck Dia.	Code No.
NMTB30					
NMTB30	1/4"	2.76"	3.00"	1.34"	534-400
NMTB30	1/2"	3.56"	4.02"	1.97"	534-402
NMTB40					
NMTB40	1/4"	2.96"	3.19"	1.34"	534-404
NMTB40	1/2"	3.75"	4.20"	1.97"	534-406
NMTB50					
NMTB50	1/2"	3.75"	4.20"	1.97"	534-408

Straight Shank 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 assures separation safety

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

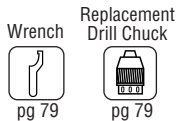


Capacity	D1	L	L1	D	Code No.
1/4"	3/4"	5.87"	2.56"	1.34"	534-410
1/4"	1"	5.07"	2.56"	1.34"	534-412
1/2"	1-1/4"	6.06"	2.56"	1.97"	534-414
1/2"	1-1/2"	6.45"	2.96"	1.97"	534-416

Morse 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 assures separation safety

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



Shank	Gripping Dia. (mm)	Chuck Dia.	Gauge Length	Code No.
M.T. 4	0-13	51	100	337-426
M.T. 4	3-16	57	120	337-428

Replacement Drill Chucks

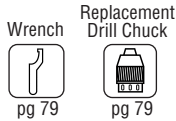


Description	Code No.
1/4" chuck	534-422
1/2" chuck for BT 40	534-424
1/2" chuck for Cat 40	534-425
5/8" chuck for Cat 40	534-427
5/8" chuck for Cat 50	534-429

R8 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 assures separation safety

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



Shank	Gripping Dia. (mm)	Chuck Dia.	Gauge Length	Draw Bar	Code No.
R-8	0-13	51	100	7/16-20	337-430
R-8	3-16	57	120	7/16-20	337-432

Replacement Chuck Wrenches



Description	Code No.
Fits 1/4" chucks	534-418
Fits 1/2" chucks	534-420
Fits 5/8" chucks	534-431
Fits 5/8" chucks	534-433

Super Heavy Duty Ball Bearing Drill Chucks

GS Ball Bearing Chucks are specially designed for HEAVY DUTY drilling applications on production drilling machines, jig borers, milling machines, lathes and radials. The ideal choice for those jobs that require close tolerance drilling. The ball thrust bearing reduces friction in the chuck's closing mechanism, so the operator can apply more gripping power on the twist drill shank.

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



Chuck Model	Capacity (in.)	Mount	Code No.
13BXH	1/64-1/2	JT6	536-500
16BXH	1/64-5/8	JT3	536-502
19BXH	1/64-3/4	JT4	536-504

Plain Bearing Drill Chucks

GS Plain Bearing Chucks are specially designed for stationary drilling, turning, milling, and woodworking machines.

- Sleeve design eliminates the possibility of tooth breakage
- Hardened jaws and body help to avoid wear and lengthen the life of the chuck
- Each chuck supplied with a key



Chuck Model	Capacity (in.)	Mount	Code No.
6GH	1/64-1/4	JT1	536-506
6GH	1/64-1/4	3/8-24	536-508
10GH	1/64-3/8	3/8-24	536-510
10GH	1/64-3/8	JT2	536-512
13GH	1/64-1/2	JT33	536-514
13GH	1/64-1/2	JT6	536-516
13GH	1/64-1/2	1/2-20	536-518
16GH	1/64-5/8	JT3	536-520
19GH	1/8-3/4	JT4	536-522

Super Precision 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 assures separation safety

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



Chuck Model	Capacity (in.)	Mount	Code No.
6XH	1/64-1/4	JT1	536-524
6XH	1/64-1/4	3/8-24	536-526
10XH	1/64-3/8	JT2	536-528
10XH	1/64-3/8	JT33	536-530
10XH	1/64-3/8	3/8-24	536-532
13XH	1/64-1/2	JT6	536-534
13XH	1/64-1/2	JT33	536-536
13XH	1/64-1/2	1/2-20	536-538
16XH	1/8-5/8	JT6	536-540
16XH	1/8-5/8	JT33	536-542

Drill Chuck Keys

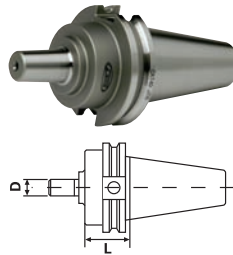


Chuck Model	Key No.	Code No.
6GH 1/4	P1	536-544
10GH 3/8	P2	536-546
13GH 1/2 JT33	P6	536-548
13GH 1/2 JT6	P6	536-548
16GH 5/8	P7	536-550
19GH 3/4	P7	536-550
13BXH	P6	536-548
16BXH	P7	536-550
19BXH	P7	536-550

CAT Taper Jacobs Taper Adapter

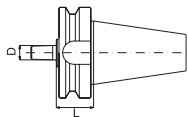
- Shank traverse ground to obtain optimum accuracy
- Meets or exceeds ANSI specifications
- .0002" or better TIR ensures the best possible cutting tool life

Pull Stud



Taper	JT Size	L	D	Code No.
CAT40				
CT40	JT#2	1.61"	.560"	531-490
CT40	JT#3	1.58"	.812"	531-492
CT40	JT#4	1.49"	1.13"	531-494
CT40	JT#6	1.61"	.677"	531-496
CT40	JT#33	1.61"	.625"	531-498
CAT50				
CT50	JT#2	1.61"	.560"	531-500
CT50	JT#3	1.58"	.812"	531-502
CT50	JT#4	1.49"	1.13"	531-504
CT50	JT#6	1.61"	.677"	531-506
CT50	JT#33	1.61"	.625"	531-508

BT Taper Jacobs Taper Adapter

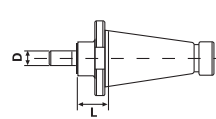


Pull Stud



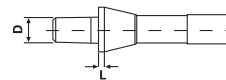
Taper	JT Size	L	D	Code No.
BT30				
BT30	JT#1	1.06"	.385"	532-218
BT30	JT#2	1.02"	.560"	532-220
BT30	JT#3	0.98"	.812"	532-222
BT30	JT#6	1.02"	.677"	532-224
BT30	JT#33	1.02"	.625"	532-226
BT40				
BT40	JT#2	1.61"	.560"	532-230
BT40	JT#3	1.57"	.812"	532-232
BT40	JT#6	1.61"	.677"	532-234
BT40	JT#33	1.61"	.625"	532-236
BT50				
BT50	JT#6	1.77"	.677"	532-237

NMTB Taper Jacobs Taper Adapter



Taper	JT Size	L	D	Code No.
NMTB40				
NMTB40	JT#1	0.69"	.385"	534-440
NMTB40	JT#2	0.65"	.560"	534-442
NMTB40	JT#3	0.61"	.812"	534-444
NMTB40	JT#6	0.65"	.677"	534-446
NMTB40	JT#33	0.65"	.625"	534-448
NMTB50				
NMTB50	JT#2	1.34"	.560"	534-450
NMTB50	JT#3	1.30"	.812"	534-452
NMTB50	JT#4	1.22"	1.13"	534-454
NMTB50	JT#6	1.34"	.677"	534-456
NMTB50	JT#33	1.34"	.625"	534-458

R8 Jacobs Taper Adapter

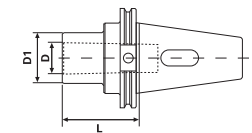


Taper	JT Size	L	D	Code No.
R8	JT#1	0.13"	.385"	534-460
R8	JT#2	0.13"	.560"	534-462
R8	JT#3	0.13"	.812"	534-464
R8	JT#6	0.13"	.677"	534-466
R8	JT#33	0.13"	.625"	534-468

CAT Morse Taper Adapters

- Shank traverse ground to obtain optimum accuracy
- Meets or exceeds ANSI specifications
- .0002" or better TIR ensures the best possible cutting tool life

Pull Stud

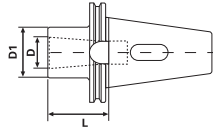


Taper	Size	L	D	D1	Code No.
CAT40					
CT40	MT#1	1.75"	.475"	1.00"	531-510
CT40	MT#2	2.36"	.700"	1.25"	531-512
CT40	MT#3	3.00"	.938"	1.57"	531-514
CT40	MT#4	3.54"	1.23"	1.97"	531-516
CAT50					
CT50	MT#2	1.75"	.700"	1.25"	531-518
CT50	MT#3	1.75"	.938"	1.57"	531-520
CT50	MT#4	3.00"	1.23"	1.97"	531-522
CT50	MT#5	4.13"	1.75"	2.75"	531-524

BT Morse Taper Adapters

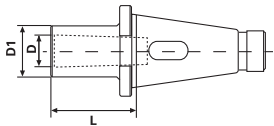
- Shank traverse ground to obtain optimum accuracy
- Meets or exceeds ANSI specifications
- .0002" or better TIR ensures the best possible cutting tool life

Pull Stud



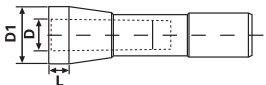
Taper	Size	L	D	D1	Code No.
BT30					
BT30	MT#1	1.75"	.475"	1.00"	532-238
BT30	MT#2	2.36"	.700"	1.25"	532-240
BT40					
BT40	MT#1	1.75"	.475"	1.00"	532-242
BT40	MT#2	2.36"	.700"	1.25"	532-244
BT40	MT#3	3.00"	.938"	1.57"	532-246
BT40	MT#4	3.54"	1.23"	1.97"	532-248
BT50					
BT50	MT#2	1.75"	.700"	1.25"	532-241
BT50	MT#3	1.75"	.928"	1.57"	532-243
BT50	MT#4	3.00"	1.231"	1.89"	532-245
BT50	MT#5	4.00"	1.748"	2.48"	532-247

NMTB Morse Taper Adapters



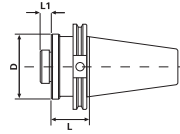
Taper	Size	L	D	D1	Code No.
NMTB40					
NMTB40	MT#1	0.94"	0.48"	1.00"	534-470
NMTB40	MT#2	1.75"	0.70"	1.25"	534-472
NMTB40	MT#3	2.25"	0.94"	1.57"	534-474
NMTB40	MT#4	3.00"	1.23"	1.97"	534-476
NMTB50					
NMTB50	MT#2	1.88"	0.70"	1.25"	534-478
NMTB50	MT#3	2.38"	0.94"	1.57"	534-480
NMTB50	MT#4	3.25"	1.23"	1.97"	534-482
NMTB50	MT#5	4.63"	1.75"	2.75"	534-484

R8 Morse Taper Adapters



Taper	Size	L	D	D1	Code No.
R8	MT#1	0.44"	0.48"	1.00"	534-486
R8	MT#2	0.44"	0.70"	1.25"	534-488
R8	MT#3	2.56"	0.94"	1.57"	534-490

CT Taper Boring Head Holders

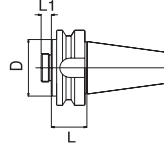


Pull Stud



Taper	Thread	L	L1	D	Code No.
CAT40					
CT40	7/8" - 20	1.75"	0.44"	1.75"	531-526
CT40	1-1/2" - 18	1.75"	0.50"	2.96"	531-528
CAT50					
CT50	7/8" - 20	1.75"	0.44"	1.75"	531-530
CT50	1-1/2" - 18	1.75"	0.50"	2.96"	531-532

BT Taper Boring Head Holders

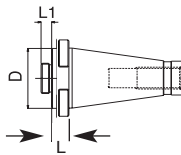


Pull Stud



Taper	Thread	L	L1	D	Code No.
BT30					
BT30	7/8"-20	1.75"	0.44"	1.75"	532-250
BT30	1-1/2"-18	1.75"	0.50"	2.96"	532-252
BT40					
BT40	7/8"-20	1.75"	0.44"	1.75"	532-254
BT40	1-1/2"-18	1.75"	0.50"	2.96"	532-256

NMTB Taper Boring Head Holders



Taper	Thread	L	L1	D	Code No.
NMTB40	7/8"-20	1.75"	0.44"	1.75"	534-492
NMTB40	1-1/2"-18	1.75"	0.50"	2.96"	534-494
NMTB50	7/8"-20	1.75"	0.44"	1.75"	534-496
NMTB50	1-1/2"-18	1.75"	0.50"	2.94"	534-498

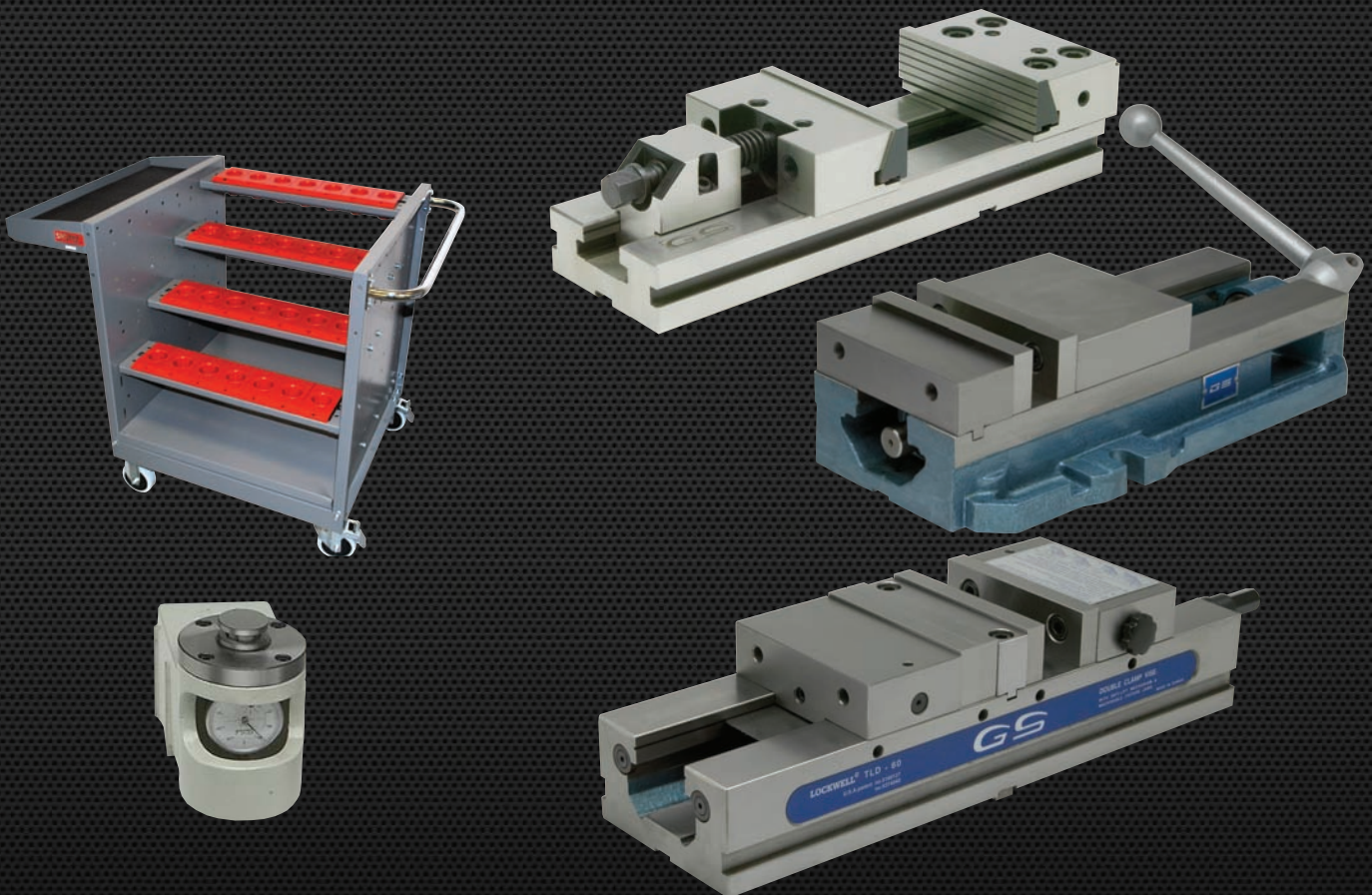
VICES & ACCESSORIES

VICES

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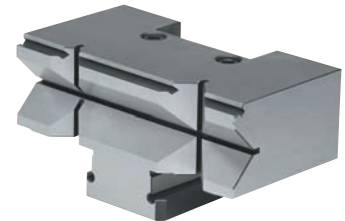
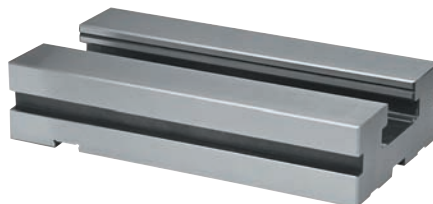
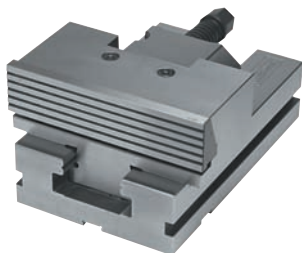
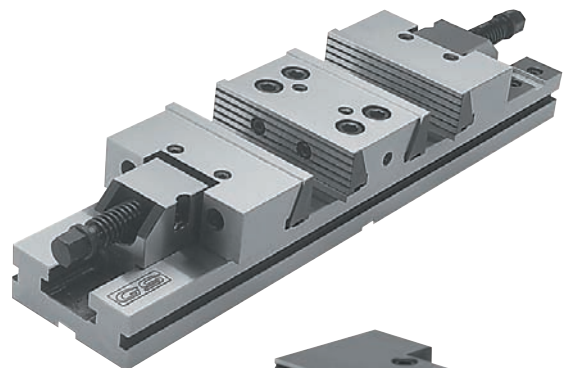
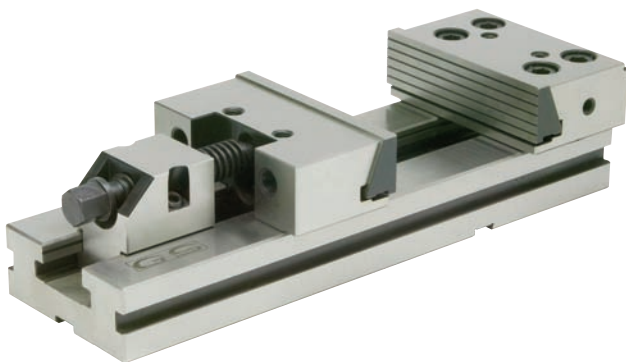
VICES



**Precision
Clamping
Systems
for all
Applications**

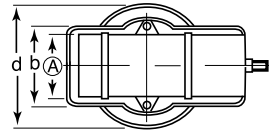
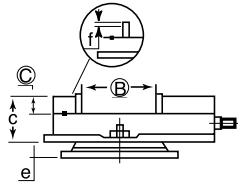
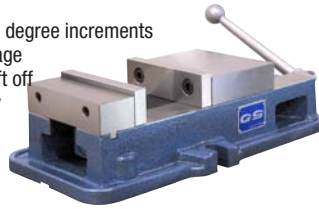


**High Quality
and Accuracy**



GS 6" Precision Milling Machine Vises

- Vises are Matched
- 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 other quality movable jaw does not lift off the bed, and the deflection of the stationary jaw is minimized



(Inch)

Model	Jaw Width A	Jaw Open B	C	O.A.L.	b	c	d	e	f	Plain Ship Wt	Code No.
GS675	6	7.5	1.77	17.2	9.13	4.6	12	1.65	.39	80lbs	327-275M
GS890	6	8.9	1.5	17.2	8.3	4.6	12	1.7	.2	80lbs	327-290M
Jaw Plates for GS675 & GS890											327-287
Swivel base only											327-280
Replacement Handle											327-285

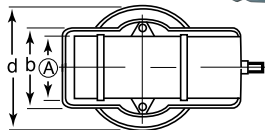
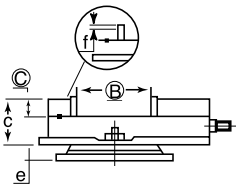
Capacity



Model	Capacity I	Capacity II	Capacity III	Capacity IV
GS 675	7-1/2"	10-1/4"	13-1/8"	15-7/8"
	191mm	260mm	333mm	400mm
GS 890	8.89"	11.65"	14.44"	17.24"
	226mm	296mm	367mm	438mm

GS 8" Precision Milling Machine Vises

- Vises are Matched
- 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 other quality movable jaw does not lift off the bed, and the deflection of the stationary jaw is minimized



(Inch)

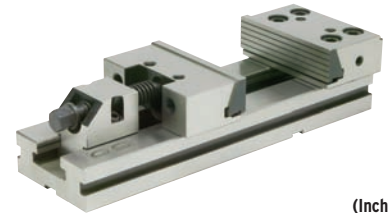
Model	Jaw Width A	Jaw Open B	C	O.A.L.	b	c	d	e	f	Plain Ship Wt	Code No.
GS810	8	10.0	2.25	21.8	11.62	5.55	15.0	1.85	.43	158lbs	327-300
Jaw Plates for GS810											327-311
Swivel base only											327-310
Replacement Handle											327-305

GS Plain Base Modular Vises

Manufactured under rigid quality control. As a result of the high standard construction, GS Vises can be depended upon to maintain their accuracy under the most severe operating conditions. The modular design and the concept of interchangeability makes possible a wide variety of set up combinations.

Features/Benefits:

- High accuracy
- Unlimited clamping range
- High quality alloy steel
- High clamping pressure
- No jaw lift
- All vises are matched



(Inch)

Model	Jaw Width (A)	Opening (C)	Jaw Height (B)	Code No.
1	4	4	1.2	382-005
2	5	6	1.6	382-010
3	6	8	2	382-015
4	7	8	2.4	382-020
4	7	12	2.4	382-025
4	7	16	2.4	382-030
4	7	20	2.4	382-032
5	8	8	2.6	382-035
5	8	12	2.6	382-040
5	8	16	2.6	382-045
5	8	20	2.6	382-050
5	8	24	2.6	382-052
6	12	8	3.2	382-055
6	12	12	3.2	382-060
6	12	16	3.2	382-065
6	12	20	3.2	382-070
6	12	24	3.2	382-075
6	12	28	3.2	382-080
6	12	32	3.2	382-085

Prismatic Jaws



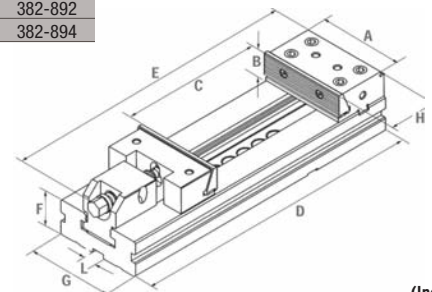
Model No.	Code No.
#3	382-890
#4	382-892
#5	382-894

6" Soft Jaw Assembly



Model No.	Code No.
#3	382-895

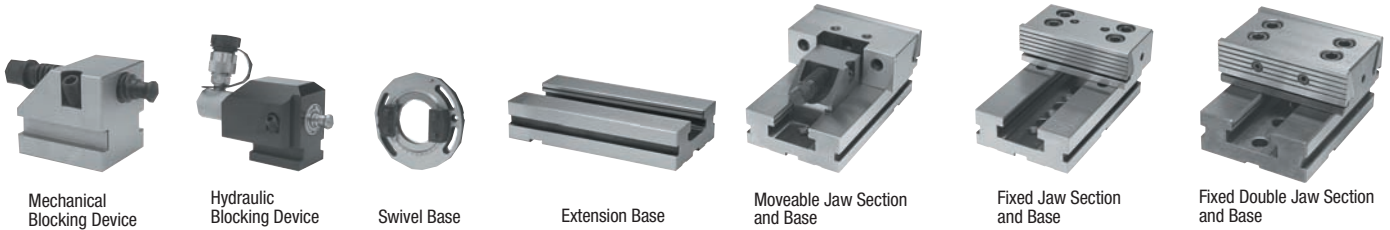
Modular Vise Specs



(Inch)

Vise Size	Code No.	D	E	F	G	H	I	Kgs
5 x 6	382-010	13.8	16.4	1.6	3.8	3.04	.64	12.9
6 x 8	382-015	16.8	20.86	2	5	3.574	.64	25.5
7 x 8	382-020	17.91	24.80	2.32	5.8	3.876	.64	37
7 x 12	382-025	21.85	24.80	2.32	5.8	3.876	.64	42
7 x 16	382-030	25.78	24.80	2.32	5.8	3.876	.64	47
7 x 20	382-032	29.72	24.80	2.32	5.8	3.876	.64	52
8 x 8	382-035	22.9	28.74	2.8	6.8	4.536	.64	64
8 x 12	382-040	26.8	28.74	2.8	6.8	4.536	.64	69
8 x 16	382-045	30.7	28.74	2.8	6.8	4.536	.64	74
8 x 20	382-050	34.6	28.74	2.8	6.8	4.536	.64	79
8 x 24	382-052	38.6	28.74	2.8	6.8	4.536	.64	84
12 x 8	382-055	24.8	32.67	3.07	7.67	4.74	.64	95
12 x 12	382-060	28.7	32.67	3.07	7.67	4.74	.64	105
12 x 16	382-065	32.7	32.67	3.07	7.67	4.74	.64	115
12 x 20	382-070	36.6	32.67	3.07	7.67	4.74	.64	125
12 x 24	382-075	40.5	32.67	3.07	7.67	4.74	.64	135
12 x 28	382-080	44.5	32.67	3.07	7.67	4.74	.64	145
12 x 32	382-085	48.5	32.67	3.07	7.67	4.74	.64	155

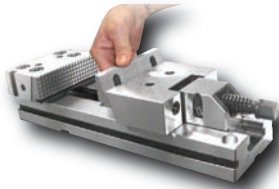
Parts & Accessories For GS Modular Vises



Part Description	#1 Code No.	#2 Code No.	#3 Code No.	#4 Code No.	#5 Code No.	#6 Code No.
Hydraulic Blocking Device			382-750	382-755	382-760	382-765
Swivel Base	382-380	382-385	382-390	382-395	382-400	382-405
Extension Base	382-260	382-265	382-270	382-275	382-280	382-285
Mechanical Blocking Device	382-470	382-475	382-480	382-485	382-490	382-495
Moveable Jaw	382-412	382-417	382-422	382-427	382-432	382-437
Fixed Jaw	382-410	382-415	382-420	382-425	382-430	382-435
Main Screw	382-850	382-852	382-854	382-856	382-858	382-860
T-Wrench	382-820	382-822	382-824	382-826	382-828	382-830
Box Wrench	382-874	382-876	382-878	382-880	382-882	382-884
Vise Holding Jaws	382-685	382-690	382-695	382-700	382-705	382-710
Positioning Keys	382-655	382-660	382-665	382-670	382-675	382-680
Work Stop	382-770	382-775	382-780	382-785	382-790	382-795
Jaw Plate for Fixed Jaw	382-862	382-864	382-866	382-868	382-870	382-872
Jaw Plate for Moveable Jaw	382-863	382-865	382-867	382-869	382-871	382-873
Lock Screw for Blocking Device	382-471	382-476	382-481	382-486	382-491	382-496
Pre-Assembled Groups						
Overall Length	5.5"	6.30"	9"	10"	12"	13.75"
Leadscrew Overhang	2.08"	2.3"	2.8"	2.0"	3"	2.16"
Moveable Jaw Section and Base Assembly	382-290	382-295	382-300	382-305	382-310	382-315
Fixed Jaw Section and Base (Standard)	382-320	382-325	382-330	382-335	382-340	382-345
Fixed Double Jaw Section and Base (Standard)	382-350	382-355	382-360	382-365	382-370	382-375

Modular Vise w/ Quick Interchangeable Pulldown Jaws

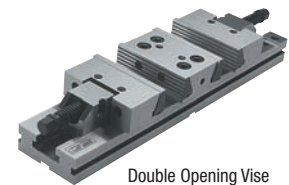
- No tools needed for quick hand change of downward jaw plates



Description	Code No.
6 x 8 Modular Vise	382-896
Pair Soft Jaws	382-897

GS Modular Vises - Single & Double Opening

- High accuracy
- No length limitations
- Unlimited clamping range
- No jaw lift
- High quality alloy steel
- Low profile
- High clamping pressure
- All vises are matched
- Mechanical and pneumohydraulic blocking devices
- Extra long base



Model	Opening	O.A.L.	Jaw Width	Weight (kg)	Code No.
Single Opening Modular Vise					
1	11.4	18	4	10	382-101
2	12.6	20.5	5	17	382-102
3	14.7	23	6	31	382-103
3	18.11	27	6	34	382-104
4	16	26	7	46	382-105
4	20	30	7	51	382-106
5	24	36	8	92	382-110
Double Opening Modular Vise					
3	2 x 4.3	23	6	38	382-153
3	2 x 6.3	27	6	41	382-154
4	2 x 6.7	30	7	63	382-156
5	2 x 10	40	8	107	382-172
6	2 x 6.3	35	12	154	382-175
6	2 x 16	55	12	194	382-180

DOUBLE CLAMP VISE

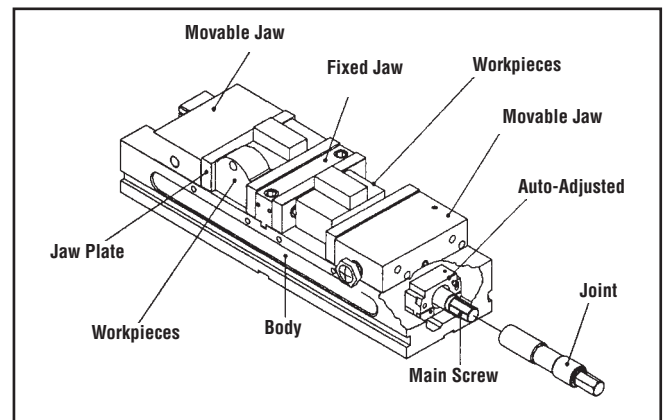
- Double clamp set ~ one handle can simultaneously operate two moveable jaws and clamps 2 workpieces of same or different size or one large workpiece
- This model can increase efficiency and productivity of CNC machines
- The movable jaw ANTI-LIFT mechanism provides alignment to workpiece without jaw 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 vise is made of FDC-80.000 PSI (55kg/cm²) Ductile iron, and slide ways are hardened to HRC45
- The rigid construction prevents base distortion
- Precision made to high accuracy standard



GS Double Clamp Vise
(TLD-40G/HV, TLD-60G/HV)

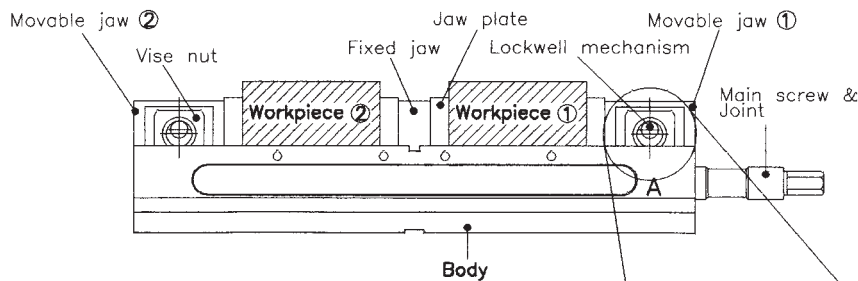
Double Clamp Vises

Model No.	Code No.
4" - TLD-40G/HV	382-610
6" - TLD-60G/HV	382-600

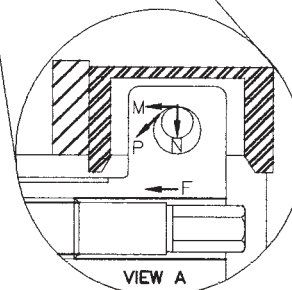


Feature:

ANTI-LIFT MECHANISM



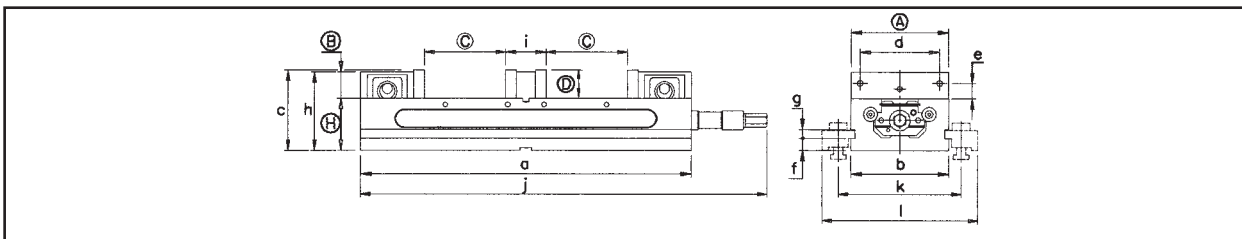
- Clamping force equalization and ANTI-LIFT mechanism features virtually eliminate the deflection of fixed centre jaw and movable jaw lift
- Clamping range for clamping 2 workpieces simultaneously is 125 mm (4.9") each or 275 mm (10.8") for one large workpiece
- Double clamp seat



ANTI-LIFT Mechanism

CLAMPING EXAMPLES FOR DIFFERENT APPLICATIONS:

<p>Clamping 2 pieces of same size workpieces. Max. Capacity: 90mm (3.5") 125mm (4.9")</p>	<p>Clamping 2 pieces of different size of workpieces. Max. Capacity: 90mm (3.5") 125mm (4.9")</p>	<p>Large workpieces are able to be clamped after moving fixed jaw. Max. Capacity: 237mm (9.3") 1315mm (12.4")</p>
<p>Stepped jaw plate for thin workpiece. Max. Capacity: 215mm (8.4") 275mm (10.8")</p>	<p>Clamping 2 different workpieces. Max. Capacity: 215mm (8.4") 275mm (10.8")</p>	<p>Large thin workpiece is able to be clamped after removing jaw plate on fixed jaw. Max. Capacity: 405mm (15.9") 520mm (20.5")</p>



Dimensional Information For Double Clamp Vises

(mm/in.)

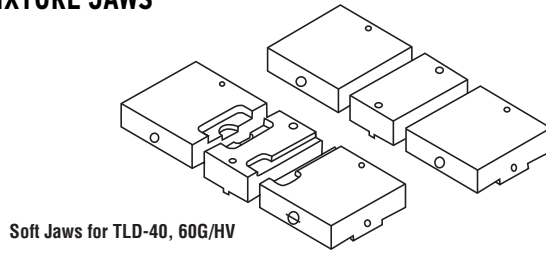
Model No.	A	B	C	D	a	b	c	d	e	f	g	h	H	i	j	k	l	Guide Block	Weight (kg/lb)
TLD-40G	103	33	90	38	405	104	101.5	63.5	17.5	13	31	96.5	63.5	55	430	143	195	18	20
(TLD-40HV)	4.05	1.29	3.54	1.49	15.9	4.09	3.99	2.5	0.68	0.51	1.22	3.79	2.5	2.16	16.9	5.62	7.67	0.709	44
TLD-60G	152	41.5	125	44.5	520	154	123.5	98.42	23.8	18	16	126.5	82.55	64	639	193	245	18	48
(TLD-60HV)	5.98	1.6	4.9	1.75	20.47	6	4.98	3.87	0.94	0.7	0.63	4.86	3.25	2.52	25.15	7.59	9.64	0.709	105.6

TLD-40G, TLD-60G; match vise, TLD-40HV, TLD-60H (horizontal and vertical 2 way)

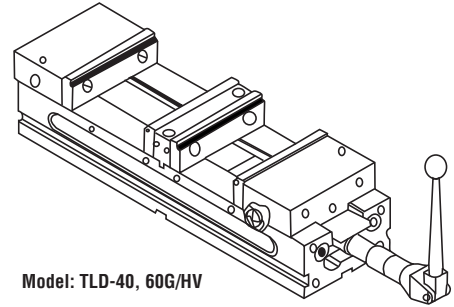
Inspection Specification:

	<p>Parallelism: running face to bottom of bed. Guaranteed: 0.01 mm (0.0004")</p>		<p>Parallelism: keyways on bottom of bed to jaw plate. Guaranteed: 0.02 mm (0.0008")</p>
	<p>Squareness: between running face and jaw plate. Guaranteed: 0.03 mm (0.0012")</p>		<p>Squareness: keyways on bottom of bed to jaw plate. Guaranteed: 0.02 mm (0.0008")</p>
	<p>Squareness both sides to fixed jaw plate. Guaranteed: 0.02 mm (0.0008")</p>		<p>Parallelism: running face of the test block to bottom. Guaranteed: 0.02 mm (0.0008")</p>

MACHINABLE FIXTURE JAWS



Soft Jaws for TLD-40, 60G/HV



Model: TLD-40, 60G/HV

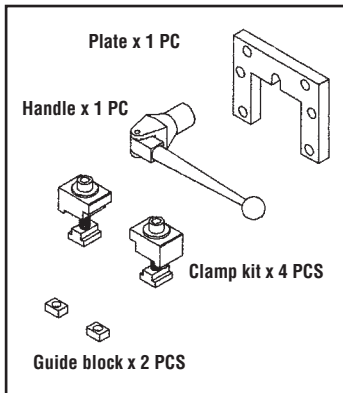
Machinable Fixture Jaws

Description	Code No.
4" aluminum soft jaws	382-612
4" step jaws	382-614
6" aluminum soft jaws	382-602
6" step jaws	382-604

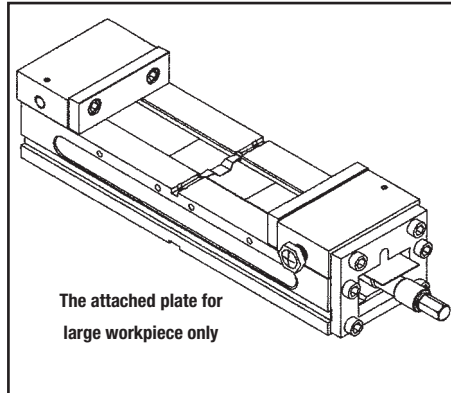
Steel Jaw Sets

Model No.	Code No.
4" steel jaw set for TLD40	382-615
6" steel jaw set for TLD60	382-605

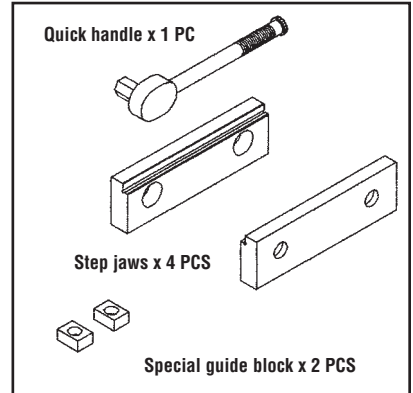
Standard Accessories



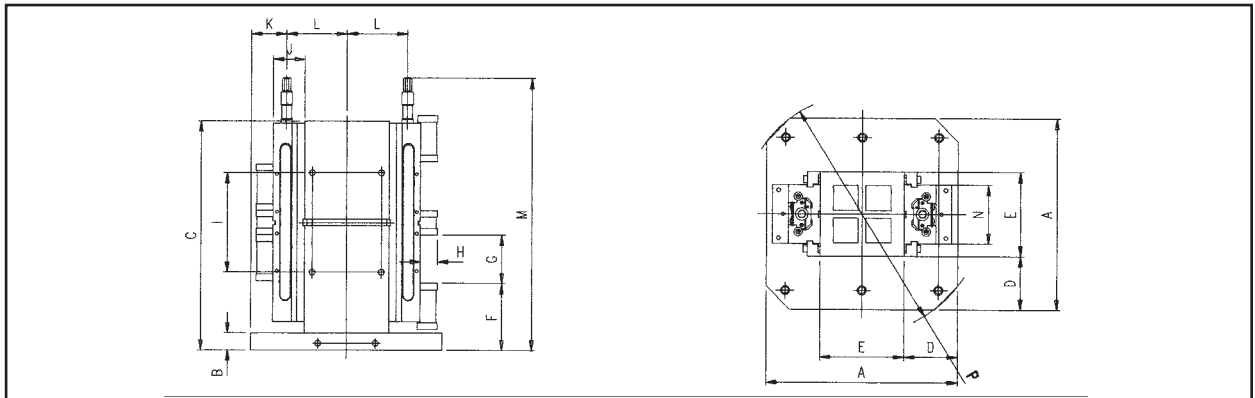
Usage of "Plate"



Optional Accessories



JIG BLOCK



Jig Block Dimensional Specifications

(mm/in.)

Model NO.	Use Vise	Pallet Size	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Weight (kg/lb)
GS-40-4C	TLD-40	400 x 400	400	40	500	110	180	168	90	38	203	63.5	75.5	124.5	543	104	506	118
GS-40-4C	TLD-40	400 x 400	15.74	1.57	19.68	4.33	7.08	6.61	3.54	1.49	7.99	2.5	2.907	4.90	21.3	4.09	19.92	259.6
GS-60-4C	TLD-60	500 x 500	500	45	600	140	220	175	125	44.5	260	82.5	92	158	714	154	628	233
GS-60-4C	TLD-60	500 x 500	19.68	1.77	23.62	5.51	8.66	6.88	4.92	1.75	10.23	3.25	3.62	6.25	28.11	6.02	24.72	512.6



Height Presetter

Fast Accurate Measurement of Vertical Height Magnetic Base for Horizontal Operation.

Reference point of work can be measured very quickly and accurately without damage to tool teeth. The red LED is activated when the plunger comes within the measuring range of the reference height.



Size	Description	Code No.
4"	Height Presetter	337-950

Height Presetter - Optical Type

- Height 50 mm
- With magnetic base
- The red lamp will light up when touched
- Accuracy 0.005 mm
- Combined vertical and horizontal in a unit
- Weight: 0.3 kg



Model No.	Code No.
HP-50ZM (Magnetic Base)	337-970
HP-50Z (Standard Base)	337-971

Electronic Tool Length Setter

- High Accuracy
- Easy Operation
- Be sure to remove all chips and oil from the sensor plate and the base of the HP-50E as well as from the workpiece and tool
- To move the tool approaching the sensor plate slowly
- When touching, the "LED" turns on immediately and "H" is just 50.00 mm (or 2")
- LED will not function if batteries are not set in correctly.
- Designed to be used on ferrous and non-ferrous materials

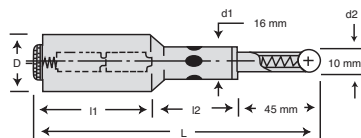


Model No.	H	Base Dia.	Sensor Plate Dia.	Code No.
With Magnetic Base				
HP-50EM	50 mm	40mm	12.7mm	337-976
HP-100 EM	100 mm	40mm	12.7mm	337-978

Touch Point Sensor

Model No. VPS-20

- Red pilot can be seen clearly
- High sensitivity location sensor
- Location of end surface, outside circle dia., inside circle dia. of the workpiece for processing can be detected with full effect
- Whole travel of red pilot is illuminating, detecting also can be done during turning while spindle stops

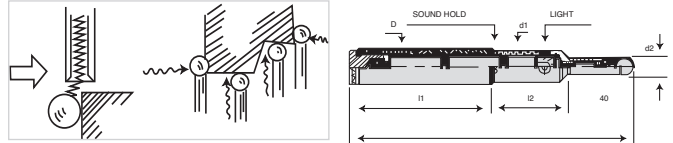


D	d1	d2	L	I1	I2	Type	Code No.
20	18	10	160	79	41	UM-5#(SP)	337-955

Touch Point Sensor (With Beeper)

Model No. VPS-20B / VPS-3/4B

- Unit will sound at the same time when the red lamp lights up
- Accuracy: within 0.005 mm



D	d1	d2	L	I1	I2	Type	Code No.
20	16	10	157	77	35	UM-5#	337-960
3/4	.629"	.394"	6.18"	3.03"	1.378	UM-5#	337-962

Machinists' Mate

Self-Contained Visual Aid - 1/2" Shank

For Machine Set-Up

- Checks machine, tool and workpiece set-up
- Acts as edge finder on vertical milling machines
- Trams table quickly
- Parallels vise
- Checks "spindle run out" – simply, quickly, accurately
- Emits light to indicate precise contact of part at $\pm 0.001"$



Shank Dia.	Code No.
1/2"	145-600

NC/CNC Trolley

Complete Tool Trolley with 4 Tool Trays and Inserts.

- Trays bolt in
- (w)1002mm x (D)650mm x (H)830mm
- Weight: 51kgs



Desc.	Taper Type	Inserts Per Tray	Replacement Plastic Inserts Code No.	Tool Cart Code No.
Trolley, 4 trays hold 28 inserts	40	7	326-986	326-985
Trolley, 4 trays hold 20 inserts	50	5	326-996	326-995

Standard Draw Bar - SDB-2J

- 7/16-20 thread
- 4140 heat treated Alloy Steel



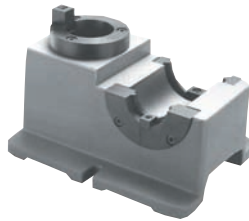
Machine Type	Bar Length (in.)	Hex Length (in.)	Code No.
2J Head Bridgeport Variable Speed	18	5.5	151-700



Deluxe Tool Setting Stand

Quick and easy way to change cutters and pull studs. Protects the taper of holder with protective insert. Available in all tapers.

- Select between horizontal or vertical tool holding; quick and simple operation
- For Cat BT & NMTB Tapers



Taper	Adapter Holding	Code No.
TL40	40 Taper x 2 (only BT & NMTB)	335-250
TL50	50 Taper x 2 (only BT & NMTB)	335-260
TL50	50 Taper x 1 / 40 Taper x 1	335-240
TL40	50 Taper x 1 / 40 Taper x 1	335-230

Tool Lock

- For Cat BT & NMTB Tapers



Description	Code No.
30 Taper	335-270
40 Taper	335-275
50 Taper (Only CAT50 & NMTB50)	335-280

Tool Lock

Quick and easy way to change cutters and pull studs. Protects the taper of holder with protective insert. Available in all tapers.

- This is an excellent helping tool for simple, rapid and safe tool holding
- For Cat BT & NMTB Tapers



Model	Code No.
TL-30	335-200
TL-35	335-205
TL-40	335-210
TL-45	335-215
TL-50	335-220

Spindle Taper Wipers

Features:

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



Model No.	Taper	Total Length	Code No.
VTW-30	#30	168mm	326-210
VTW-40	#40	159mm	326-215
VTW-50	#50	265mm	326-220
VTW-63A	HSK63A	166mm	326-235
VTW-50H	HSK50	159mm	326-225
VTW-63H	HSK63	167mm	326-230

Pull Studs Cross-Reference Chart

Can't find your pull stud?

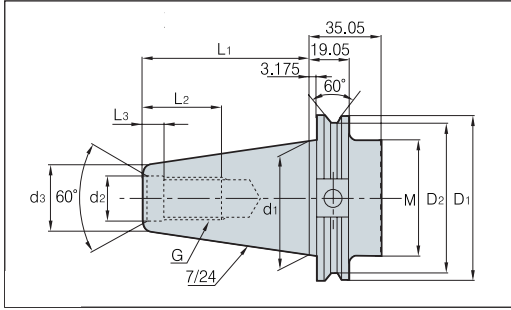
We invite your inquiries
Please have ready the following Information
when calling

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



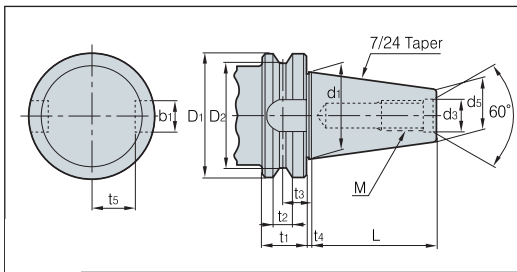
Retention Knob Supply	Collis No.	Parlec No.	Command No.	Lyndex No.	Code No.
BT-30 (M12 x 1.75 Draw Bar Thread)					
311-09	64723	3003TRK	RB2M-0001	B30-4500	366-000
311-09A	64721	3004TRK	RB2M-0002	B30-6000	366-002
BT-40 (M16 x 2 Draw Bar Thread)					
329-12			RS4M-0205	B40-1500	366-003
329-13	69101	P329-13	RS4M-0205C		366-004
311-13	64711	4003TRK	RB4M-0001	B40-4500	366-006
311-13A	64713	4004TRK	RB4M-0002	B40-6000	366-008
311013B	69059	4002TRK	RB4M-0003	B40-9000	366-010
311-13D		4003TRKC	RB4M-0001-C	B40-4500*	366-012
311-13E		4004TRKC	RB4M-0002-C	B40-6000*	366-014
311-13F		4002TRKC	RB4M-0003-C	840-9000*	366-016
111-26	69047	F40TRK	RS4M-0115		366-018
111-22A	69980	A40TRK	RS4M-0105		366-020
312-25					366-022
111-26A		F40TRKC	RS4M-0115C		366-024
					366-026
350-00V		MH40TRK			366-028
171-26					366-030
171-27					366-032
CT-40 (5/8-11 Draw Bar Thread)					
711-23		4030TRK	RS4E-0114-C		366-034
					366-036
312-26	69007				366-038
111-22	67751	40TRK	RC4E-0001	C40-STD*	366-040
111-23	64724	40NTRK	RC4E-0002	C40-STD	366-042
312-22	64732		RB4E-0100	C40-MAZAK	366-044
126-22	69978				366-046
316-16		4008TRK	RS4E-0212	C40-1500	366-048
311-14	64712	4009TRK		C40S-4500	366-050
311-14A	64714	4014TRK	RB4E-0002	C40S-6000	366-052
311-14B	64683	4001TRK	RB4E-0003	C40S-9000	366-054
316-17	64730	4008TRKC	RS4E-0212-C	C40-1500*	366-056
315-14		4009TRKC		C40S-4500*	366-058
318-14A		4014TRKC	RB4E-0002-C	C40S-6000*	366-060
360-30		4001TRKC	RB4E-0003-C	C40S-9000*	366-062
171-22	64725	C400TRK	RS4E-0104		366-064
171-23	69029	C400TRKC	RS4E-0104-C		366-066
321-14	64729	4005TRK	RB4E-0001	C40-4500	366-068
				C40-6000	366-070
				C40-9000	366-072
				C40-4500*	366-074
				C40-6000*	366-076
				C40-9000*	366-078
CT-45 (3/4-10 Draw Bar Thread)					
111-33	67752	45TRK	RC5E-0001	C45STD*	366-080
BT-50 (M24 x 3 Draw Bar Thread)					
111-44A		A50TRK	RS6M-0105		366-082
311-17	69995	5003TRK	RS6M-0001	B50-4500	366-084
311-17A		5004TRK	RB6M-0002	B50-6000	366-086
311-17B	64719	5002TRK	RB6M-0003	B50-9000	366-088
316-43		5003TRKC	RB6M-0001-C	B50-4500*	366-090
CT-50 (1"-8 Draw Bar Thread)					
111-46	69993	50NTRK	RC6E-0002	C50-STD	366-092
312-46	64737	M50TRK			366-094
111-44	57753	50TRK	RC6E-0001	C50-STD*	366-096
311-18	64720	5005TRK	RB6E-0001	C50-4500	366-098
311-18A	64722	5014TRK	RB6E-0002	C50-6000	366-100
311-18B	69057	5001TRK	RB6E-0003	C50-9000	366-102
316-45	64731	5005TRKC	RB6E-0001-C	C50-4500*	366-104
318-44A	69057	5014TRKC	RB6E-0002-C	C50-6000*	366-106
342-18B		5001TRKC	RB6E-0003-C	C50-9000	366-108

CAT Taper Dimensions



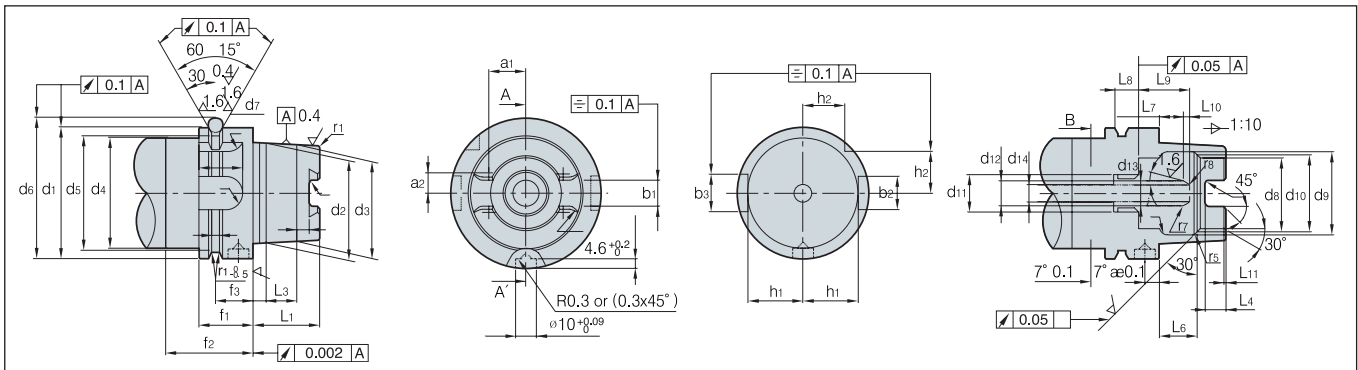
Shank No	D ₁	D ₂	M	d ₁	d ₂	d ₃	L ₁	L ₂	L ₃	G
CAT40	63.5	56.36	44.45	44.45	16.28	21.84	68.25	28.45	4.78	5/8-11
CAT45	82.55	75.41	57.15	57.15	19.46	27.69	82.55	38.1	4.78	3/4-10
CAT50	98.43	91.29	69.85	69.85	26.19	35.05	101.6	44.45	6.35	1-8

BT Taper Dimensions



BT No.	D ₁	D ₂	t ₁	t ₂	t ₃	t ₄	d ₁	d ₃	L	M	b ₁	t ₅	d ₅
35	53	43	22	10	14.6	2	38.1	13	56.5	M12 x 1.75	16.1	19.6	21.62
40	63	52	25	10	16.6	2	44.45	17	65.4	M16 x 2	16.1	22.6	25.3
45	85	73	30	12	21.2	3	57.15	21	82.8	M20 x 2.5	19.3	29.1	33.1
50	100	85	35	15	23.2	3	69.85	25	101.8	M24 x 3	25.7	35.4	40.1

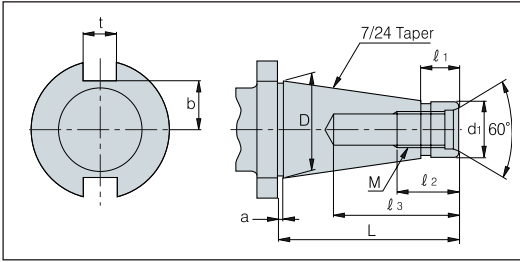
HSK Taper Dimensions



Shank No	b ₁	b ₂	b ₃	d ₁	d ₂	d ₃	d ₄	d ₅	d ₆	d ₇	d ₈	d ₉	d ₁₀	d ₁₁	d ₁₂	d ₁₃	d ₁₄	a ₁	a ₂
HSK50	10.54	12	14	50	38	36.90	42	43	59.3	7	26	32	29	M16X1	10	6.8	6.8	13.997	7.648
63	12.5	16	14	63	48	46.53	53	55	72.3	7	34	40	37	M18X1	12	8	8.4	17.862	9.25
100	20	20	14	100	75	72.80	85	92	109.75	7	53	63	58	M24X1.5	16	12	12	27.329	15.00

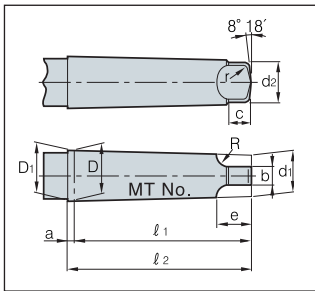
Shank No	f ₁	f ₂	f ₃	f ₄	b ₁	b ₂	L ₁	L ₂	L ₃	L ₄	L ₅	L ₆	L ₇	L ₈	L ₉	L ₁₀	L ₁₁	L ₁₂	r ₁	r ₂	r ₃	r ₄	r ₅	r ₆	r ₇	r ₈
HSK50	26	42	18	3.75	2	15.5	25	5	11	7.5	4.5	14.13	10	10	23	3	1	19	1	1.5	2.38	6	0.5	1	2	6
63	26	42	18	3.75	28.5	20	32	6.3	14.7	10	6	18.13	10	12	24.5	3	1	21	1.2	1.5	3	8	0.6	1.5	3	8
100	29	45	20	3.75	44	31.5	50	10	24	15	10	28.56	12.5	16	28	3	1.5	24	2	2	3	12	1	1.5	3	10

NMTB Taper Dimensions



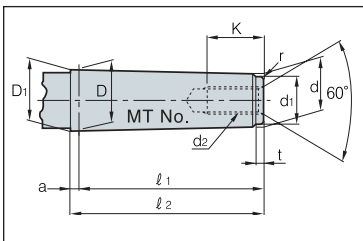
NT No.	D	D ₁	L	l ₁	M	l ₂	l ₃	a	t	b	
30	1 ¹ / ₄	31.750	17.40 ^{-0.29} / _{-0.36}	70	20	UNC ¹ / ₂ "	24	50	1.6	15.9	6
40	1 ³ / ₄	44.450	25.32 ^{-0.30} / _{-0.384}	95	25	UNC ⁵ / ₈ "	30	60	1.6	15.9	22.5
50	2 ³ / ₄	69.850	39.60 ^{-0.31} / _{-0.41}	130	25	UNC 1"	45	90	3.2	25.4	35
60	4 ¹ / ₄	107.950	60.20 ^{-0.34} / _{-0.46}	210	45	UNC ¹ / ₄ "	56	110	3.2	25.4	60

Morse Taper With Tang



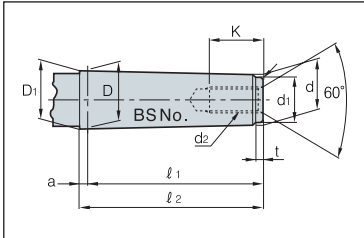
MT No.	Taper	Taper angle (α)	D	a	D ₁	d ₁	l ₁	l ₂	d ₂	b	c	e	R	r
0	¹ / _{19.212}	1 29' 27"	9.045	3	9.201	6.104	56.5	59.5	6.0	3.9	6.5	10.5	4	1
1	¹ / _{20.047}	1 25' 43"	12.065	3.5	12.240	8.972	62.0	65.5	8.7	5.2	8.5	13.5	5	1.2
2	¹ / _{20.020}	1 25' 50"	17.780	5	18.030	14.034	75.0	80.0	13.5	6.3	10	16	6	1.6
3	¹ / _{19.922}	1 26' 16"	23.825	5	24.076	19.107	94.0	99.0	18.5	7.9	13	20	7	2
4	¹ / _{19.254}	1 29' 15"	31.267	6.5	31.605	25.164	117.5	124.0	24.5	11.9	16	24	8	2.5
5	¹ / _{19.002}	1 30' 26"	44.399	6.5	4.741	36.531	149.5	156.0	35.7	15.9	19	29	10	3
6	¹ / _{19.180}	1 29' 36"	63.348	8	63.765	52.399	210.0	218.0	51.0	19.0	27	40	13	4
7	¹ / _{19.231}	1 29' 22"	83.058	10	83.578	68.186	286.0	296.0	66.8	28.6	35	54	19	5

Morse Taper Screw Type



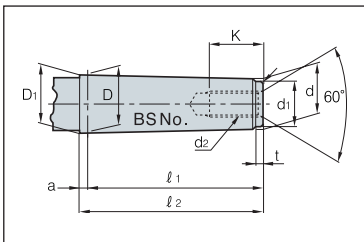
MT No.	Taper	Taper angle (α)	D	a	D ₁	d ₁	l ₁	l ₂	d ₁	d ₂	k	t	r
0	¹ / _{19.212}	1 29' 27"	9.045	3	9.201	6.442	50	53	6	-		4	0.2
1	¹ / _{20.047}	1 25' 43"	12.065	3.5	12.230	9.396	53.5	57	9	M6	16	5	0.2
2	¹ / _{20.020}	1 25' 50"	17.780	5	18.030	14.583	64	69	14	M10	24	5	0.2
3	¹ / _{19.922}	1 26' 16"	23.825	5	24.076	19.759	81	86	19	M12	28	7	0.6
4	¹ / _{19.254}	1 29' 15"	31.267	6.5	31.605	25.943	102.5	109	25	M16	32	9	1
5	¹ / _{19.002}	1 30' 26"	44.399	6.5	4.741	37.584	129.5	136	35.7	M20	40	9	2.5
6	¹ / _{19.180}	1 29' 36"	63.348	8	63.765	53.859	182	190	51	M24	50	12	4
7	¹ / _{19.231}	1 29' 22"	83.058	10	83.578	70.058	250	260	65	M33	80	18.5	5

Brown & Sharpe Screw Type



B&S No.	D	a	D ₁	d	d ₁	ℓ ₁	ℓ ₂	t	r	d ₂	K
4	10.221	2.4	10.321	8.890	8.0	31.0	34.2	2	0.2	-	-
5	13.286	2.4	13.386	11.430	10.0	44.4	46.8	3	0.2	-	-
6	15.229	2.4	15.330	12.700	11.0	60.0	62.7	3	0.2	M 8(1/4)	20
7	18.424	2.4	18.524	15.240	14.0	76.2	78.6	4	0.2	M10(3/8)	24
8	22.828	3.2	22.962	19.090	17.0	90.5	93.7	4	0.6	M12(1/2)	28
9	27.104	3.2	27.238	22.863	21.0	101.6	104.8	4	0.6	M12(1/2)	28
10	32.749	3.2	32.887	26.534	24.0	144.5	147.7	5	1.0	M16(5/8)	32
11	38.905	3.2	39.039	31.749	29.0	171.4	174.6	5	1.0	M16(5/8)	32
12	45.641	3.2	45.774	38.103	35.0	181.0	184.2	6	2.5	M20(3/4)	40
13	52.654	3.2	52.787	44.451	41.0	196.8	200.0	6	3.0	M20(3/4)	40
14	59.533	3.2	59.666	50.800	47.0	209.6	212.8	7	4.0	M24(1)	40
15	66.408	3.2	66.541	57.150	53.0	222.2	225.4	7	4.0	M24(1)	50
16	73.292	3.2	73.425	63.500	59.0	35.0	238.2	8	5.0	M30(11/8)	60

Brown & Sharpe With Tang



B&S No.	D	a	D ₁	d	d ₁	ℓ ₁	ℓ ₂	t	r	d ₂	K
4	10.221	2.4	10.321	8.890	8.0	31.0	34.2	2	0.2	-	-
5	13.286	2.4	13.386	11.430	10.0	44.4	46.8	3	0.2	-	-
6	15.229	2.4	15.330	12.700	11.0	60.0	62.7	3	0.2	M 8(1/4)	20
7	18.424	2.4	18.524	15.240	14.0	76.2	78.6	4	0.2	M10(3/8)	24
8	22.828	3.2	22.962	19.090	17.0	90.5	93.7	4	0.6	M12(1/2)	28
9	27.104	3.2	27.238	22.863	21.0	101.6	104.8	4	0.6	M12(1/2)	28
10	32.749	3.2	32.887	26.534	24.0	144.5	147.7	5	1.0	M16(5/8)	32
11	38.905	3.2	39.039	31.749	29.0	171.4	174.6	5	1.0	M16(5/8)	32
12	45.641	3.2	45.774	38.103	35.0	181.0	184.2	6	2.5	M20(3/4)	40
13	52.654	3.2	52.787	44.451	41.0	196.8	200.0	6	3.0	M20(3/4)	40
14	59.533	3.2	59.666	50.800	47.0	209.6	212.8	7	4.0	M24(1)	40
15	66.408	3.2	66.541	57.150	53.0	222.2	225.4	7	4.0	M24(1)	50
16	73.292	3.2	73.425	63.500	59.0	35.0	238.2	8	5.0	M30(11/8)	60



WORKHOLDING SOLUTIONS

**BUILD YOUR OWN
TOOLING PACKAGE
AND SAVE!**

GS Premium Balanced Rotary Tooling

- *DIN Coolant option - standard*
- *All Ground Body*
- *100% Forged Construction*
- *Balanced up to 30,000 rpm*



**GUARANTEED TO MATCH ALL
COMPETITORS PRICES ON EQUIVALENT PRODUCTS**



BT40 Tooling Package Quote Request Form

BT40 End Mill Holders

- DIN Coolant option - standard
- All Ground Body
- 100% Forged Construction



BT 40
Premium
Balanced
30x
RPM

Taper	Hole Dia.	Gage Length	Code No.	Select
BT40	1/8"	1.38"	531-019	<input type="checkbox"/>
BT40	1/8"	2.50"	531-021	<input type="checkbox"/>
BT40	1/8"	4.00"	531-023	<input type="checkbox"/>
BT40	3/16"	1.38"	531-025	<input type="checkbox"/>
BT40	3/16"	2.50"	531-027	<input type="checkbox"/>
BT40	3/16"	4.00"	531-029	<input type="checkbox"/>
BT40	1/4"	1.38"	532-018	<input type="checkbox"/>
BT40	1/4"	2.50"	532-020	<input type="checkbox"/>
BT40	1/4"	4.00"	532-022	<input type="checkbox"/>
BT40	5/16"	1.38"	532-024	<input type="checkbox"/>
BT40	5/16"	2.50"	532-026	<input type="checkbox"/>
BT40	5/16"	4.00"	532-028	<input type="checkbox"/>
BT40	3/8"	1.38"	532-030	<input type="checkbox"/>
BT40	3/8"	2.50"	532-032	<input type="checkbox"/>
BT40	3/8"	4.00"	532-034	<input type="checkbox"/>
BT40	7/16"	2.50"	532-036	<input type="checkbox"/>
BT40	1/2"	1.75"	532-038	<input type="checkbox"/>
BT40	1/2"	2.50"	532-040	<input type="checkbox"/>
BT40	1/2"	4.00"	532-042	<input type="checkbox"/>
BT40	5/8"	1.75"	532-044	<input type="checkbox"/>
BT40	5/8"	2.50"	532-046	<input type="checkbox"/>
BT40	5/8"	4.00"	532-048	<input type="checkbox"/>
BT40	3/4"	1.75"	532-050	<input type="checkbox"/>
BT40	3/4"	2.50"	532-052	<input type="checkbox"/>
BT40	3/4"	4.00"	532-054	<input type="checkbox"/>
BT40	7/8"	3.38"	532-056	<input type="checkbox"/>
BT40	7/8"	6.00"	532-058	<input type="checkbox"/>
BT40	1"	2.00"	532-060	<input type="checkbox"/>
BT40	1"	3.56"	532-062	<input type="checkbox"/>
BT40	1"	6.00"	532-064	<input type="checkbox"/>
BT40	1-1/4"	2.00"	532-066	<input type="checkbox"/>
BT40	1-1/4"	3.56"	532-068	<input type="checkbox"/>
BT40	1-1/4"	6.00"	532-070	<input type="checkbox"/>
BT40	1-1/2"	4.50"	532-072	<input type="checkbox"/>
BT40	1-1/2"	6.00"	532-074	<input type="checkbox"/>

BT40 Shell Mill Holders

- DIN Coolant option - standard
- All Ground Body
- 100% Forged Construction



Taper	Dia.	Gage Length	Code No.	Select
BT40	1/2"	1.75"	532-086	<input type="checkbox"/>
BT40	3/4"	1.75"	532-088	<input type="checkbox"/>
BT40	3/4"	4.00"	532-111	<input type="checkbox"/>
BT40	3/4"	6.00"	532-114	<input type="checkbox"/>
BT40	1"	1.75"	532-090	<input type="checkbox"/>
BT40	1"	4.00"	532-115	<input type="checkbox"/>
BT40	1"	6.00"	532-117	<input type="checkbox"/>
BT40	1-1/4"	2.00"	532-092	<input type="checkbox"/>
BT40	1-1/4"	4.00"	532-119	<input type="checkbox"/>
BT40	1-1/4"	6.00"	532-121	<input type="checkbox"/>
BT40	1-1/2"	2.00"	532-094	<input type="checkbox"/>

BT Taper ER Collet Chucks

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



BT 40
Premium
Balanced
30x
RPM

Taper	Collet Series	Collet Range	Gage Length	Code No.	Select
BT40	ER11	.019-.275"	2.50"	532-174	<input type="checkbox"/>
BT40	ER11	.019-.275"	4.00"	532-176	<input type="checkbox"/>
BT40	ER11	.019-.275"	6.00"	532-178	<input type="checkbox"/>
BT40	ER16	.019-.406"	3.50"	532-180	<input type="checkbox"/>
BT40	ER16	.019-.406"	5.00"	532-182	<input type="checkbox"/>
BT40	ER20	.039-.511"	2.50"	532-184	<input type="checkbox"/>
BT40	ER20	.039-.511"	4.00"	532-186	<input type="checkbox"/>
BT40	ER20	.039-.511"	6.00"	532-188	<input type="checkbox"/>
BT40	ER25	.039-.629"	2.25"	532-190	<input type="checkbox"/>
BT40	ER25	.039-.629"	4.00"	532-192	<input type="checkbox"/>
BT40	ER25	.039-.629"	6.00"	532-194	<input type="checkbox"/>
BT40	ER32	.078-.787"	1.06"	532-191*	<input type="checkbox"/>
BT40	ER32	.078-.787"	3.13"	532-196	<input type="checkbox"/>
BT40	ER32	.078-.787"	5.00"	532-198	<input type="checkbox"/>
BT40	ER40	.118-1.023"	3.13"	532-200	<input type="checkbox"/>
BT40	ER40	.118-1.023"	5.00"	532-202	<input type="checkbox"/>

* ER Shorty collet chuck

Company: _____

Contact: _____

Phone: _____

Fax: _____

e-mail: _____

Notes: _____

ER Collet Sets



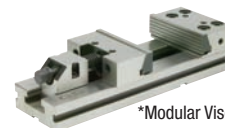
* Case may not be as shown

Collet	Description	Range	Code No.	Select
ER11	Inch Size 7pc Collet Set	1/16-1/4 x 32nds	337-401	<input type="checkbox"/>
ER11	Decimal 13pc Collet Set	.019"-.271"	337-379	<input type="checkbox"/>
ER16	Inch Size 11pc Collet Set	1/16-3/8 x 32nds	337-403	<input type="checkbox"/>
ER16	Decimal 10pc Collet Set	.019"-.393"	337-380	<input type="checkbox"/>
ER20	Inch Size 15pc Collet Set	1/16-1/2 x 32nds	337-404	<input type="checkbox"/>
ER20	Decimal 12pc Collet Set	.039"-.510"	337-382	<input type="checkbox"/>
ER25	Inch Size 17pc Collet Set	1/8-5/8 x 32nds	337-405	<input type="checkbox"/>
ER25	Decimal 15pc Collet Set	.039"-.629"	337-383	<input type="checkbox"/>
ER32	Inch Size 21pc Collet Set	1/8-3/4 x 32nds	337-407	<input type="checkbox"/>
ER32	Decimal 18pc Collet Set	.078"-.787"	337-384	<input type="checkbox"/>
ER40	Inch Size 29pc Collet Set	1/8-1" x 32nds	337-409	<input type="checkbox"/>
ER40	Decimal 23pc Collet Set	.118"-1.023"	337-386	<input type="checkbox"/>

GS Modular & Milling Machine Vises

• Vises are Matched

*Milling Machine Vise



*Modular Vise



Model	Jaw Width	Jaw Opening	Code No.	Select
GS675	6	7.5	327-275M	<input type="checkbox"/>
GS890	6	8.9	327-290M	<input type="checkbox"/>
GS810	8	10.0	327-300	<input type="checkbox"/>
#3 Modular	6	8	382-015	<input type="checkbox"/>

NC/CNC Trolley

Complete Tool Trolley with 4 Tool Trays and Inserts.

- Trays bolt in
- (W) 39.45"
- (D) 25.59"
- (H) 32.68"
- Weight: 112.20 lbs



Desc.	Taper Type	Trays x Inserts	Code No.	Select
Trolley	40	4 x 7	326-985	<input type="checkbox"/>
Trolley	50	4 x 5	326-995	<input type="checkbox"/>

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Distributed By:



Kitchener

500 Manitou Drive
Kitchener, Ontario
N2C 1L3

Edmonton

9649-49th Ave
Edmonton, AB
T6E 5Z5

Maumee, Ohio

416 Dussel Drive
Maumee, Ohio
43537

Toll Free: 1-800-265-8221

Phone: (519) 748-5750

Email: sales@sowatool.com

Fax: (519) 748-9304

web: www.sowatool.com