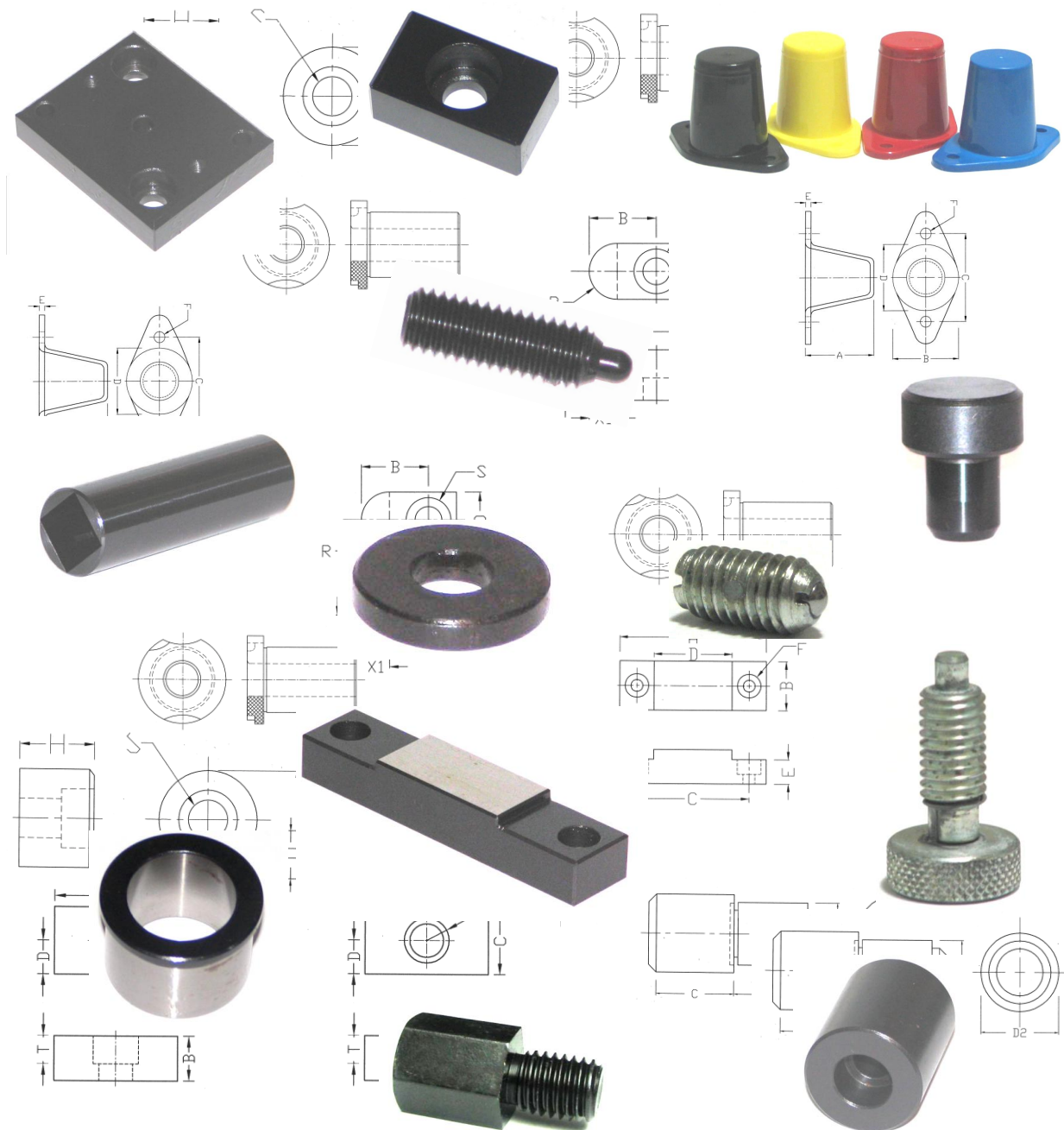


SECTION A

BLD

TOOLING COMPONENTS



BLD PRECISION TOOLS & ACCESSORIES
2346, Bankside Drive, Mississauga, ON L5M 6E2, Canada
Tel/Fax : 905-286-1174. e-mail : bldtools@yahoo.ca

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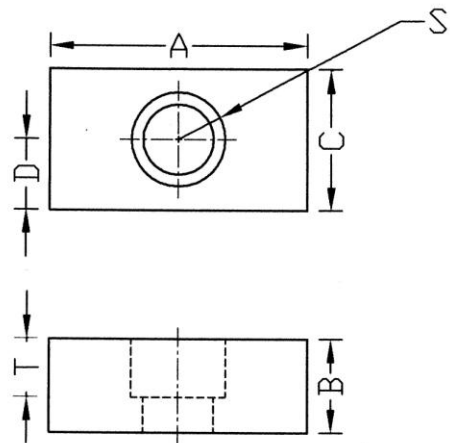
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BLD PRECISION TOOLS & ACCESSORIES

Tel/Fax : 905-286-1174. e-mail : bldtools@yahoo.ca

FIXTURE KEYS (PLAIN)

Material: C1018 or Equivalent. Heat Treat: Carburized, Hardened & Ground
Finish: Black Oxide.



These are plain keys designed for fixtures to fit one specific machine table. These keys are hardened & precision ground all over.

Inch

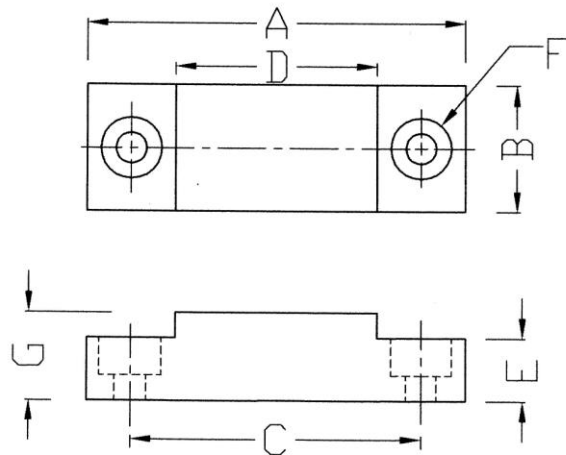
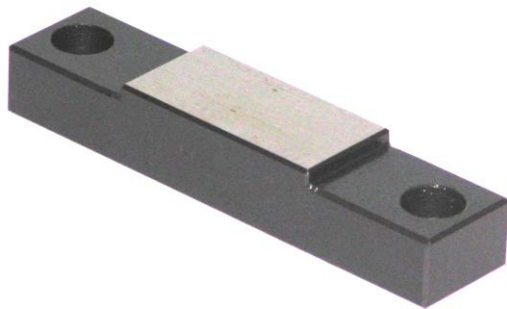
Part No.	A	B	C	D	T	Slot Size	Screw Size S
01-01-002	3/4	1/2	1/2	1/4	9/32	1/2	1/4-20
01-01-005	3/4	1/2	5/8	5/16	3/8	5/8	5/16-18
01-01-011	1 1/4	1/2	3/4	3/8	3/8	3/4	5/16-18

HEAVY DUTY REST PADS - RECTANGULAR

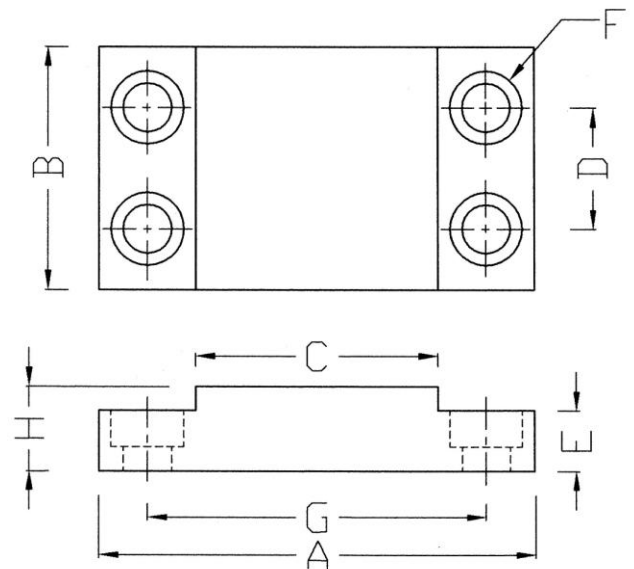
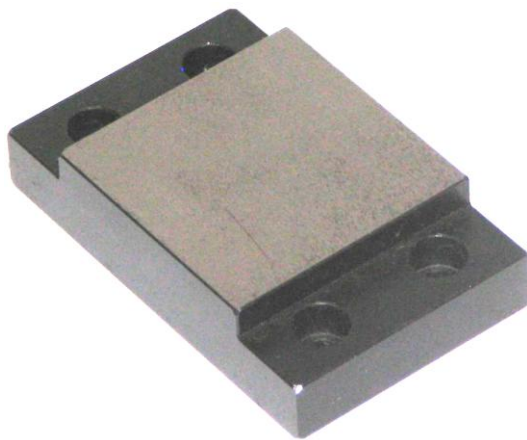
Material : 1020 Steel or Equivalent.

Heat Treat : Carburized, Hardened and Ground

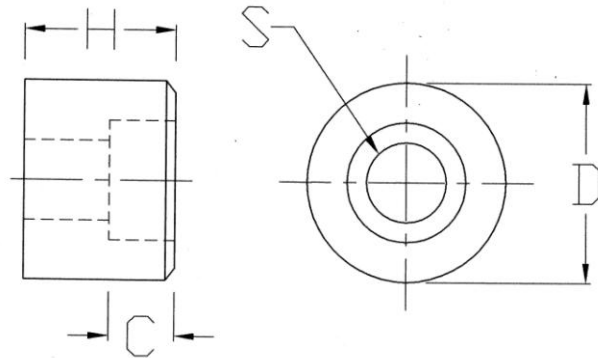
Finish : Black Oxide

**Inch**

Part No.	A	B	C	D	E	F	G + .0005 - .0000
01-02-002	3½	1	2¾	2	5/8	5/16 or M8	3/4
01-02-004	4½	1	3¾	3	5/8	5/16 or M8	3/4
01-02-006	5½	1	4¾	4	5/8	5/16 or M8	3/4

HEAVY DUTY REST PADS - SQUARE**Material : 1020 Steel or Equivalent****Heat Treat : Hardened and Ground****Finish : Black Oxide**

Part No.	A	B	C	D	E	F	G	H + .0005 - .0000
01-02-009	3¼	2	2	1	1/2	1/4 or M6	2½	3/4

JIG REST BUTTONS**Material : Low Carbon Steel or Equivalent****Heat Treat : Case Hardened****Finish : Black Oxide**

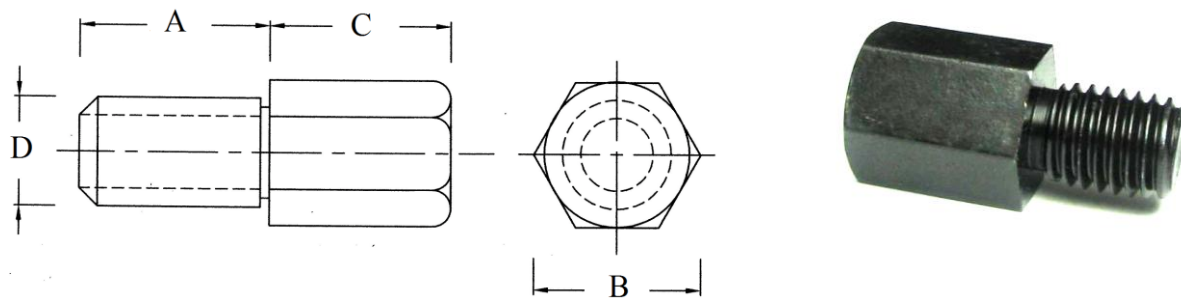
Useful for locating parts in jigs and fixtures, as work piece support or a jig foot.

Inch

Part No.	D	H + .001 - .000	C	S
01-04-002	1/2	3/8	7/32	#10
01-04-003	1/2	1/2	7/32	#10
01-04-005	5/8	3/8	9/32	1/4
01-04-006	5/8	1/2	9/32	1/4
01-04-007	5/8	5/8	9/32	1/4
01-04-015	7/8	1/2	11/32	5/16
01-04-016	7/8	5/8	11/32	5/16
01-04-017	7/8	3/4	11/32	5/16
01-04-019	7/8	1	11/32	5/16
01-04-022	1¼	3/4	13/32	3/8
01-04-024	1¼	1	13/32	3/8
01-04-025	1¼	1 ½	13/32	3/8

SCREW REST BUTTONS

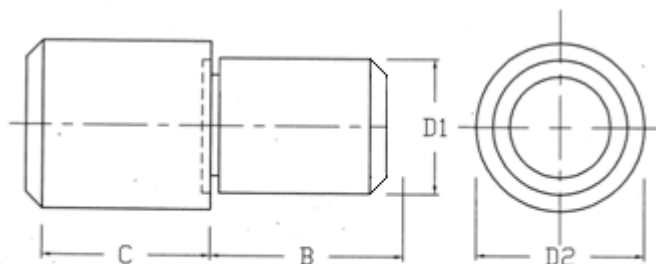
Material : Low Carbon Steel
Heat Treat : Case Hardened
Finish : Black Oxide

**Inch**

Part No.	A	B	C +0.010 +0.005	D
01-11-001	3/8	3/8	1/4	1/4-20
01-11-002	3/8	3/8	3/8	1/4-20
01-11-003	3/8	3/8	1/2	1/4-20
01-11-004	3/8	3/8	3/4	1/4-20
01-11-005	3/8	3/8	1	1/4-20
01-11-006	1/2	1/2	1/4	3/8-16
01-11-007	1/2	1/2	3/8	3/8-16
01-11-008	1/2	1/2	1/2	3/8-16
01-11-009	1/2	1/2	3/4	3/8-16
01-11-010	1/2	1/2	1	3/8-16
01-11-011	5/8	5/8	1/4	1/2-13
01-11-012	5/8	5/8	3/8	1/2-13
01-11-013	5/8	5/8	1/2	1/2-13
01-11-014	5/8	5/8	5/8	1/2-13
01-11-015	5/8	5/8	3/4	1/2-13
01-11-016	5/8	5/8	1	1/2-13

Metric

Part No.	A	B	C	D
01-11-101M	10 mm	10	5	M6
01-11-102M	10 mm	10	10	M6
01-11-103M	10 mm	10	15	M6
01-11-104M	10 mm	10	20	M6
01-11-105M	10 mm	10	25	M6
01-11-106M	13 mm	13	5	M10
01-11-107M	13 mm	13	10	M10
01-11-108M	13 mm	13	15	M10
01-11-109M	13 mm	13	20	M10
01-11-110M	13 mm	13	25	M10
01-11-111M	17 mm	16	5	M12
01-11-112M	17 mm	16	10	M12
01-11-113M	17 mm	16	15	M12
01-11-114M	17 mm	16	20	M12
01-11-115M	17 mm	16	25	M12

REST BUTTONS - GROUND**Material : 1144 Steel or Equivalent****Heat Treat : Carburized & Hardened****Finish : Black Oxide****Metric**

Part No.	B (mm)	C (mm)	D1 (mm)	D2
01-12-101M	8	5	6	10
01-12-102M	8	10	6	10
01-12-103M	10	5	8	16
01-12-104M	10	10	8	16
01-12-105M	10	15	8	16
01-12-106M	10	20	8	16
01-12-107M	12	10	10	20
01-12-108M	12	15	10	20
01-12-109M	12	20	10	20

Inch

Part No.	B	C +.001 - .000	D1 + .0000 - .0005	D2
01-12-001	3/8	1/4	3/16	3/8
01-12-002	3/8	3/8	3/16	3/8
01-12-003	3/8	1/2	3/16	3/8
01-12-004	1/2	1/4	1/4	1/2
01-12-005	1/2	3/8	1/4	1/2
01-12-006	1/2	1/2	1/4	1/2
01-12-007	5/8	1/4	3/8	5/8
01-12-008	5/8	3/8	3/8	5/8
01-12-009	5/8	1/2	3/8	5/8
01-12-010	5/8	5/8	3/8	5/8
01-12-011	5/8	3/4	3/8	5/8
01-12-012	5/8	3/8	1/2	7/8
01-12-013	5/8	1/2	1/2	7/8
01-12-014	5/8	5/8	1/2	7/8
01-12-015	3/4	3/8	5/8	1
01-12-016	3/4	1/2	5/8	1
01-12-017	3/4	3/4	5/8	1
01-12-018	7/8	1/2	3/4	1 1/4
01-12-019	7/8	5/8	3/4	1 1/4

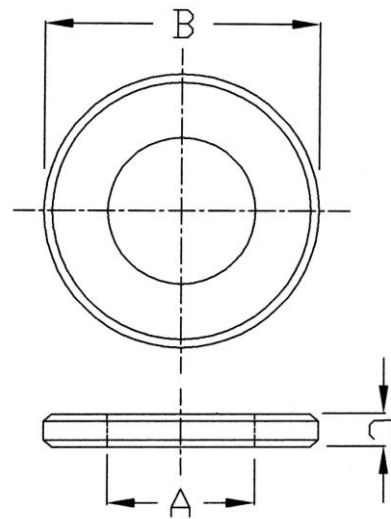
FLAT WASHERS

Material : 1010 Steel or Equivalent.

Carburized - Hardened and Ground, 55-58Rc.

Flat and Parallel within 0.005.

Finish : Black Oxide.



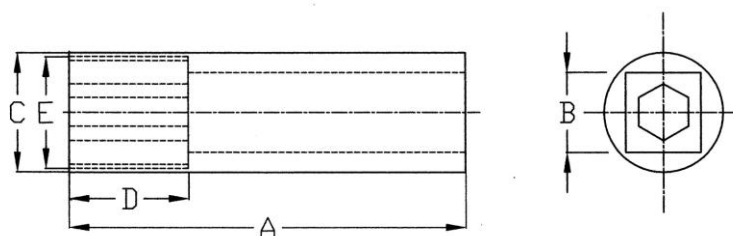
Part No.	A	B	C	Bolt Size
05-01-007	9/32	5/8	1/8	1/4 or M6
05-01-008	13/32	1	3/16	3/8 or M10
05-01-009	17/32	1 1/8	3/16	1/2 or M12
05-01-010	21/32	1 3/8	3/16	5/8 or M16
05-01-011	25/32	1 5/8	1/4	3/4 or M18
05-01-010M	21 mm	1 5/8	1/4	M20
05-01-013	1 1/32	2	9/32	1
05-01-012	29/32	1 3/4	1/4	7/8 or M22

SQUARE HOLE TOOL BIT SLEEVES

Material: Low Carbon Steel.

OD ground & concentric with square. 003 T.I.R.

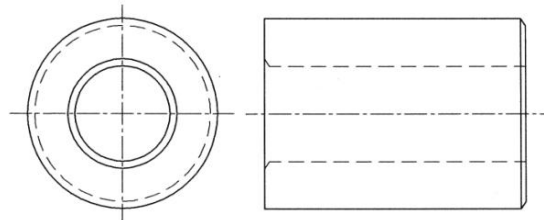
Set screw supplied with sleeves with threads.



Part No. with thread	Tool Bit Size	A	B + .006 + .004	C +.0005 -.0000	D	E
02-01-003	3/16	1½	3/16	5/16	7/16	1/4-28
02-01-005	1/4	2	1/4	7/16	1/2	5/16-24
02-01-007	5/16	2¼	5/16	1/2	9/16	3/8-24
02-01-009	3/8	2½	3/8	19/32	5/8	1/2-20
02-01-011	7/16	2 5/8	7/16	11/16	5/8	1/2-20
02-01-013	1/2	2¾	1/2	25/32	5/8	5/8-18
02-01-015	5/8	3¼	5/8	15/16	1	3/4-16
02-01-017	3/4	4	3/4	1 1/8	1	1-14
02-01-019	7/8	4	7/8	1 5/16	1¼	1-14
02-01-021	1	5	1	1½	1½	1 1/8-12

DRILL JIG BUSHINGS – P TYPE

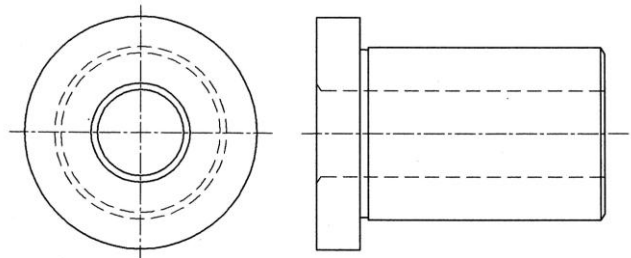
As per ANSI

**Press Fit**

Part No.	ID	OD	Length
P16-8 1/8	1/8	1/4	1/2
P20-8 3/16	3/16	5/16	1/2
P26-8 1/4	1/4	13/32	1/2
P26-12 1/4	1/4	13/32	3/4
P28-8 1/4	1/4	7/16	1/2
P32-8 1/4	1/4	1/2	1/2
P32-8 5/16	5/16	1/2	1/2
P32-12 1/4	1/4	1/2	3/4
P32-12 5/16	5/16	1/2	3/4
P40-8 3/8	3/8	5/8	1/2
P40-12 3/8	3/8	5/8	3/4
P40-16 3/8	3/8	5/8	1
P48-8 1/2	1/2	3/4	1/2
P48-12 1/2	1/2	3/4	3/4
P48-16 1/2	1/2	3/4	1
P56-8 5/8	5/8	7/8	1/2
P56-12 5/8	5/8	7/8	3/4
P56-16 5/8	5/8	7/8	1
P64-12 3/4	3/4	1	3/4
P64-16 3/4	3/4	1	1

DRILL JIG BUSHINGS – H TYPE

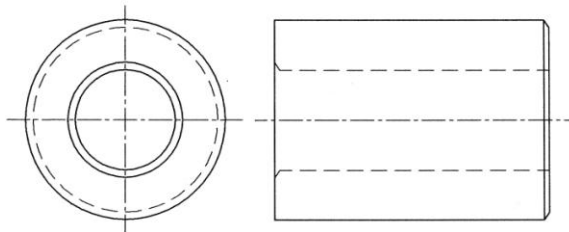
As per ANSI

**Head Press Fit**

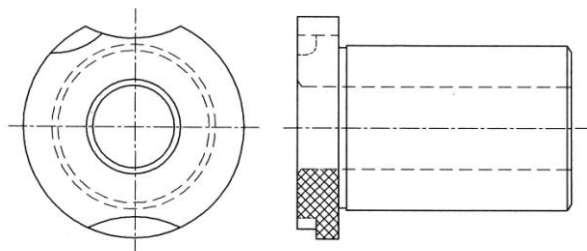
Part No.	ID	OD	Length
H32-8 1/4	1/4	1/2	1/2
H32-12 1/4	1/4	1/2	3/4
H40-8 3/8	3/8	5/8	1/2
H40-12 3/8	3/8	5/8	3/4
H40-16 3/8	3/8	5/8	1
H48-8 1/2	1/2	3/4	1/2
H48-12 1/2	1/2	3/4	3/4
H64-12 3/4	3/4	1	3/4

DRILL JIG BUSHINGS – L TYPE

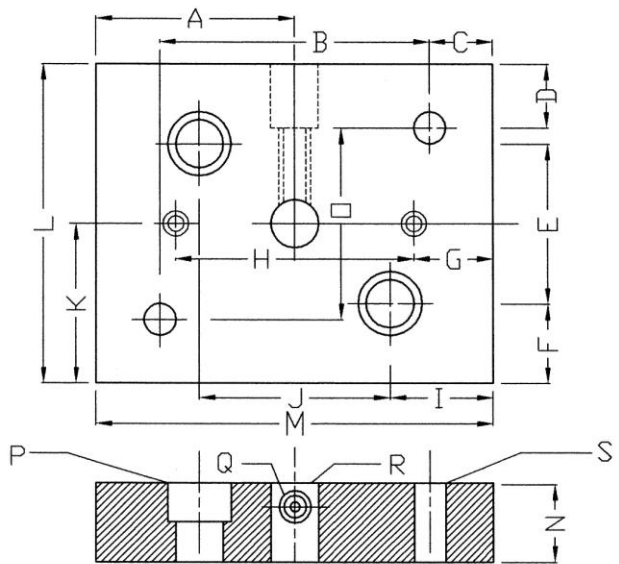
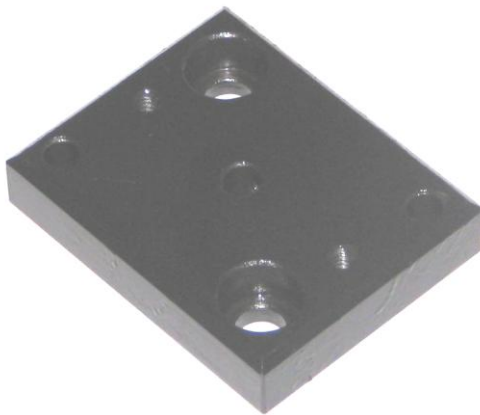
As per ANSI

**Liner**

Part No.	ID	OD	Length
L48-8 1/2	1/2	3/4	1/2
L48-12 1/2	1/2	3/4	3/4
L48-16 1/2	1/2	3/4	1
L64-16 3/4	3/4	1	1
HL88-16 1	1	1 3/8	1

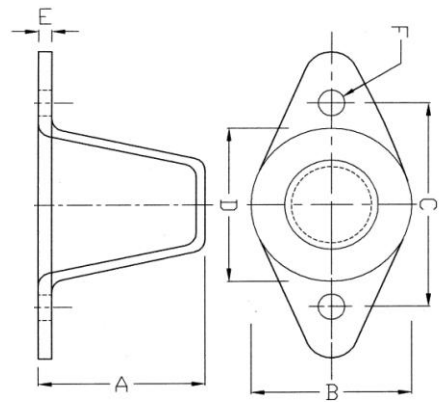
**Slip Fixed/Renewable**

Part No.	ID	OD	Length
SF40-8 3/8	3/8	5/8	1/2
SF40-12 3/8	3/8	5/8	3/4

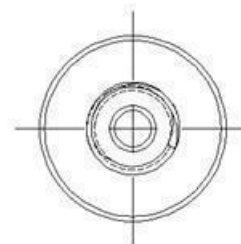
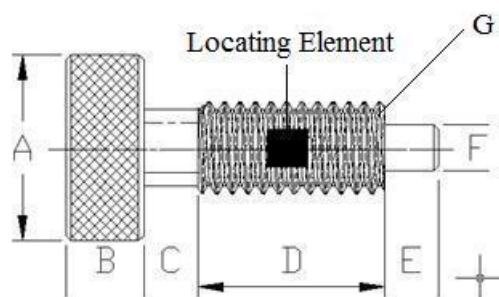
CONSTRUCTION BALL PAD**Material : 1018 Steel or Equivalent****Heat Treat : 25-30Rc****Finish : Black Oxide**

Part No.	A	B	C	D	E	F	G	H	I	J	K	L
01-16-001	1.25	2.00	0.25	0.30	1.20	0.40	0.31	1.88	0.45	1.60	1.00	2.00

M	R +.0005 - .0000	N	O	P	Q	S
2.50	.2500	0.50 $\pm$.0005	1.40	For 5/16-18 or M8 SHCS	#10-24 thread, C'Bore 15/64 x 1/2 deep	15/64 dia. drill

CONSTRUCTION BALL COVER**Material : Plastic****Colour : Blue, Red, Yellow, Black**

Part No.	Colour	A	B	C	D	E	F
01-17-001	Black	1 ½	1 ½	1 7/8	1 ¼	3/32	7/32 dia.
01-17-002	Yellow	1 ½	1 ½	1 7/8	1 ¼	3/32	7/32 dia.
01-17-003	Red	1 ½	1 ½	1 7/8	1 ¼	3/32	7/32 dia.
01-17-004	Blue	1 ½	1 ½	1 7/8	1 ¼	3/32	7/32 dia.

HAND RETRACTABLE PLUNGERS**Material : Low Carbon Steel, Hardened****Finish : Zinc Plated, Clear Chromate****Inch**

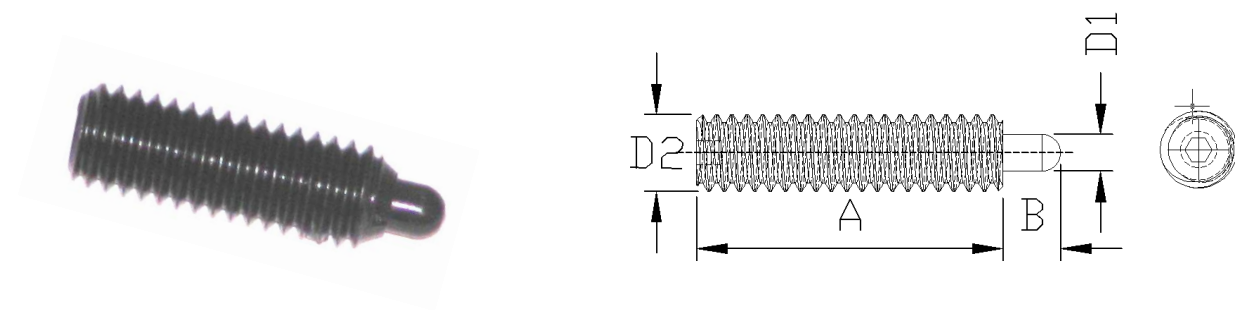
Part No.	A	B	C	D	E	F + 0.0 - 0.003	G	End Force	
								Initial (lbs.)	Final (lbs.)
04-02-006	3/4	5/16	7/32	3/4	7/32	3/16	3/8-16	1.5	8
04-02-008	1	3/8	1/4	7/8	1/4	1/4	1/2-13	2.5	10

SPRING PLUNGERS

Nose : 12L14 or Equivalent Steel, Hardened, Black Oxide Finish

Body : 12L14 or Equivalent Steel, Black Oxide Finish

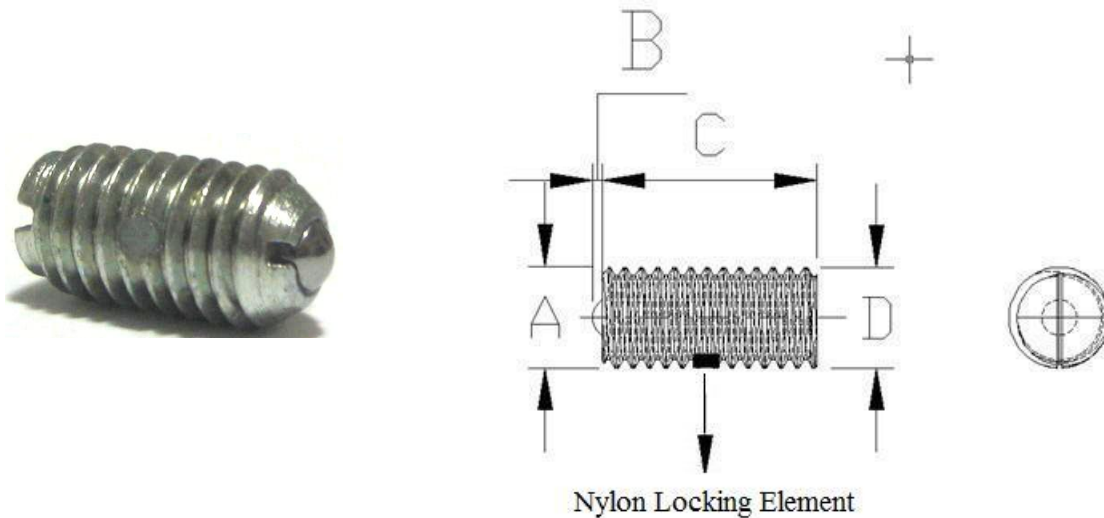
Locking Element : Nylon

**Steel Nose, Heavy Force**

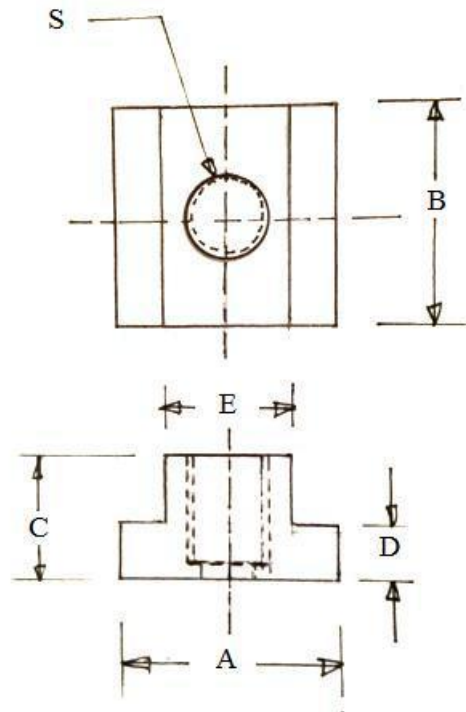
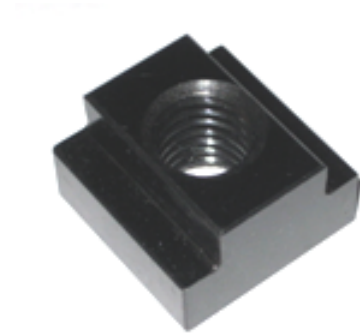
Part No.	A	B	D1	D2	End Force	
					Initial (lbs.)	Final (lbs.)
04-01-001	1	3/16	.117 / .119	1/4-20	3	13
04-01-002	1	3/16	.113 / .135	5/16-18	3	15
04-01-003	1 1/8	3/16	.184 / .186	3/8-16	5.5	14.5
04-01-004M	1	3/16	.117 / .119	M6	3	13
04-01-005M	1	3/16	.133 / .135	M8	3	15
04-01-006M	1 1/4	1/4	.246 / .248	M12	6.6	17.4

Steel Nose, Light Force

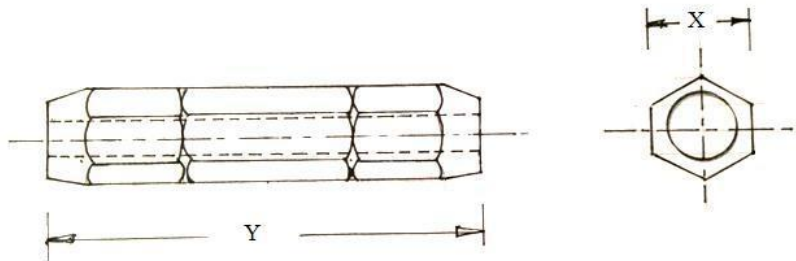
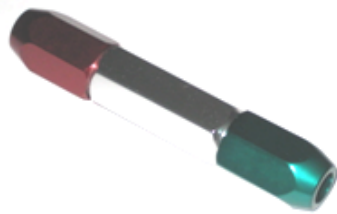
Part No.	A	B	D1	D2	End Force	
					Initial (lbs.)	Final (lbs.)
04-01-007M	1	3/16	.117 / .119	M6	1	4

BALL PLUNGERS**Body : Low Carbon Steel, Zinc Plated****Ball : Stainless Steel****Body Locking Element : Nylon**

Part No.	A mm	B mm	C mm	D mm	End Force	
					Initial (lbs.)	Final (lbs.)
04-03-010	3.2	0.90	13.50	M6	2.9	7.0
04-03-020	3.2	0.90	13.50	M6	2.0	4
04-03-030	4.0	1.00	15.00	M8	2.2	4.4

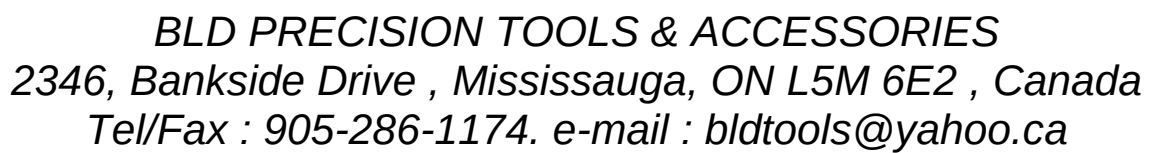
T-NUTS**Material : Carbon Steel****Heat Treat : Hardened & Ground****Finish : Black Oxide****Inch**

Part No.	Table Slot Size	A	B	C	D	E	S
01-03-002	9/16 or 14 mm	7/8	1 1/8	5/8	11/32	9/16	1/2-13
01-03-004	5/8 or 16 mm	1	1 1/8	5/8	11/32	5/8	1/2-13
01-03-009	11/16 or 18 mm	1 1/8	1 1/4	3/4	7/16	11/16	5/8-11
01-03-010	3/4	1 1/4	1 1/4	3/4	15/32	3/4	5/8-11

GAGE HANDLES**Material : Aluminum Alloy****Finish : Anodized**

Part No. Double End (Green & Red)	X (Hex) mm (approx.)	Y (Length) mm (approx.)
06-01-GNR	6.00	57.00
06-02-GNR	10.00	68.00
06-03-GNR	14.00	84.00
06-04-GNR	18.00	90.00
06-05-GNR	20.00	108.00
06-06-GNR	25.00	114.00
06-07-GNR	27.00	117.00
06-08-GNR	32.00	133.00

MODULAR TAPPING SYSTEMS

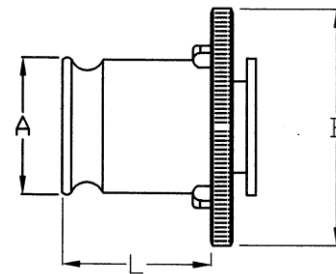


TAP ADAPTORS, POSITIVE DRIVE

- Without safety clutch, positive drive
- For synchronous tapping
- Series # 1 & # 2
- Equivalent to Bilz Sizes WE1 & WE2 respectively
- Rigid construction
- Available with coolant through capability as an option
Eliminates use of costly coolant through taps. Prices available on request



Series	A	B	L
#1	0.748	1.180	0.850
#2	1.220	1.888	1.380

**Tap Adaptors Series # 1**

Tap dimensions as per ANSI US Standard.

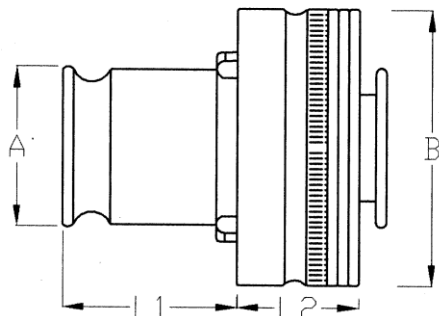
Part No.	Tap size	Tap Sh. Dia.	Tap Sq. A/F
TA 010	# 6	0.141	0.110
TA 012	# 8	0.168	0.131
TA 014	# 10	0.194	0.152
TA 016	# 12	0.220	0.165
TA 018	1/4	0.255	0.191
TA 020	5/16	0.318	0.238
TA 022	3/8	0.381	0.286
TA 024	7/16	0.323	0.242
TA 026	1/2	0.367	0.275
TA 028	9/16	0.429	0.322
TA 030	1/8P SS	0.313	0.234
TA 031	1/8P LS	0.313	0.234

Tap Adaptors Series # 2

Part No.	Tap size	Tap Sh. Dia.	Tap Sq. A/F
TA 032	5/16	0.318	0.238
TA 034	3/8	0.381	0.286
TA 036	7/16	0.323	0.242
TA 038	1/2	0.367	0.275
TA 040	9/16	0.429	0.322
TA 042	5/8	0.480	0.360
TA 044	11/16	0.542	0.406
TA 046	3/4	0.590	0.442
TA 048	13/16	0.652	0.489
TA 050	7/8	0.697	0.523
TA 052	1/4P	0.562	0.421
TA 054	3/8P	0.700	0.531
TA 056	1/2P	0.687	0.515

TAP ADAPTORS WITH TORQUE CONTROL**Tap Adaptors Series # 1**

- Equivalent to Bilz Size WES1
- With safety clutch
- Permits blind hole tapping



Series	A	B	L1	L2
#1	0.748	1.260	0.850	0.980

Inch (As per ANSI US Standard)

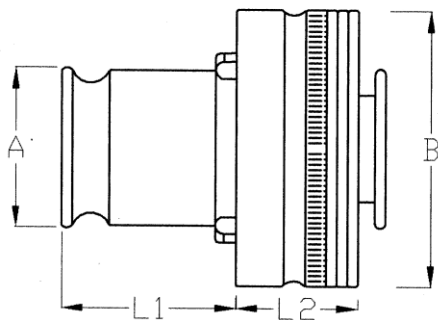
Part No.	Tap size	Tap Sh. Dia.	Tap Sq. A/F
TA 076	# 6	0.141	0.110
TA 078	# 8	0.168	0.131
TA 080	# 10	0.194	0.152
TA 082	# 12	0.220	0.165
TA 084	1/4	0.255	0.191
TA 086	5/16	0.318	0.238
TA 088	3/8	0.381	0.286
TA 090	7/16	0.323	0.242
TA 092	1/2	0.367	0.275
TA 094	9/16	0.429	0.322
TA 096	1/8P	0.313	0.234

Metric (As per ISO)

Part No.	Tap size	Tap Sh. Dia.	Tap Sq. A/F
TA 084M	M6	6.30	5.00
TA 086M	M8	8.00	6.30
TA 088M	M10	10.00	8.00
TA 092M	M12	9.00	7.10

TAP ADAPTORS WITH TORQUE CONTROL**Tap Adaptors Series # 2**

- Equivalent to Bilz Size WES2
- With safety clutch
- Permits blind hole tapping



Series	A	B	L1	L2
#2	1.220	1.970	1.380	1.340

Inch (As per ANSI US Standard)

Code No.	Tap size	Tap Sh. Dia.	Tap Sq A/F
TA 098	5/16	0.318	0.238
TA 100	3/8	0.381	0.286
TA 102	7/16	0.323	0.242
TA 104	1/2	0.367	0.275
TA 106	9/16	0.429	0.322
TA 108	5/8	0.480	0.360
TA 110	11/16	0.542	0.406
TA 112	3/4	0.590	0.442
TA 114	13/16	0.652	0.489
TA 116	7/8	0.697	0.523
TA 118	1/4P	0.562	0.421
TA 120	3/8P	0.700	0.531
TA 122	1/2P	0.687	0.515

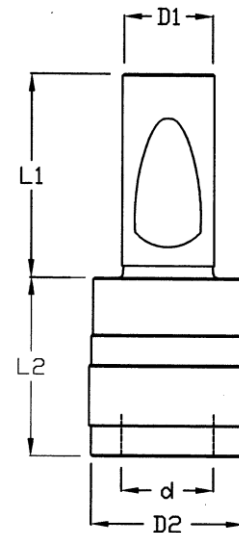
Metric (As per ISO)

Code No.	Tap size	Tap Sh. Dia.	Tap Sq. A/F
TA 098M	M8	8.00	6.30
TA 100M	M10	10.00	8.00
TA 104M	M12	9.00	7.10
TA 106M	M14	11.20	9.00
TA 108M	M16	12.50	10.00
TA 110M	M18	14.00	11.20
TA 112M	M20	14.00	11.20

MODULAR DESIGN TAPPING CHUCKS

Series # 1 & # 2 to suit tap adaptor sizes # 1 & # 2 respectively.

- Compact design

**Tapping Chuck with Parallel Shank
with Tension and Compression Axial Float**

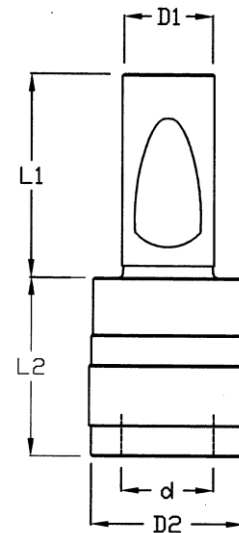
- Tension and Compression float
- Available in different shanks against specific orders

Part No.	Series	Tapping Range	d	D1 Shank Dia.	D2	L1	L2
TC142	# 1	0-5/8"	.748	1 inch	1.50	1.95	1.76
TC144	# 2	3/8-7/8"	1.220	1 inch	2.17	2.00	2.52

MODULAR DESIGN TAPPING CHUCKS

Series # 1 & # 2 to suit tap adaptor sizes # 1 & # 2 respectively.

- Compact design

**Tapping Chuck , Rigid with Parallel Shank**

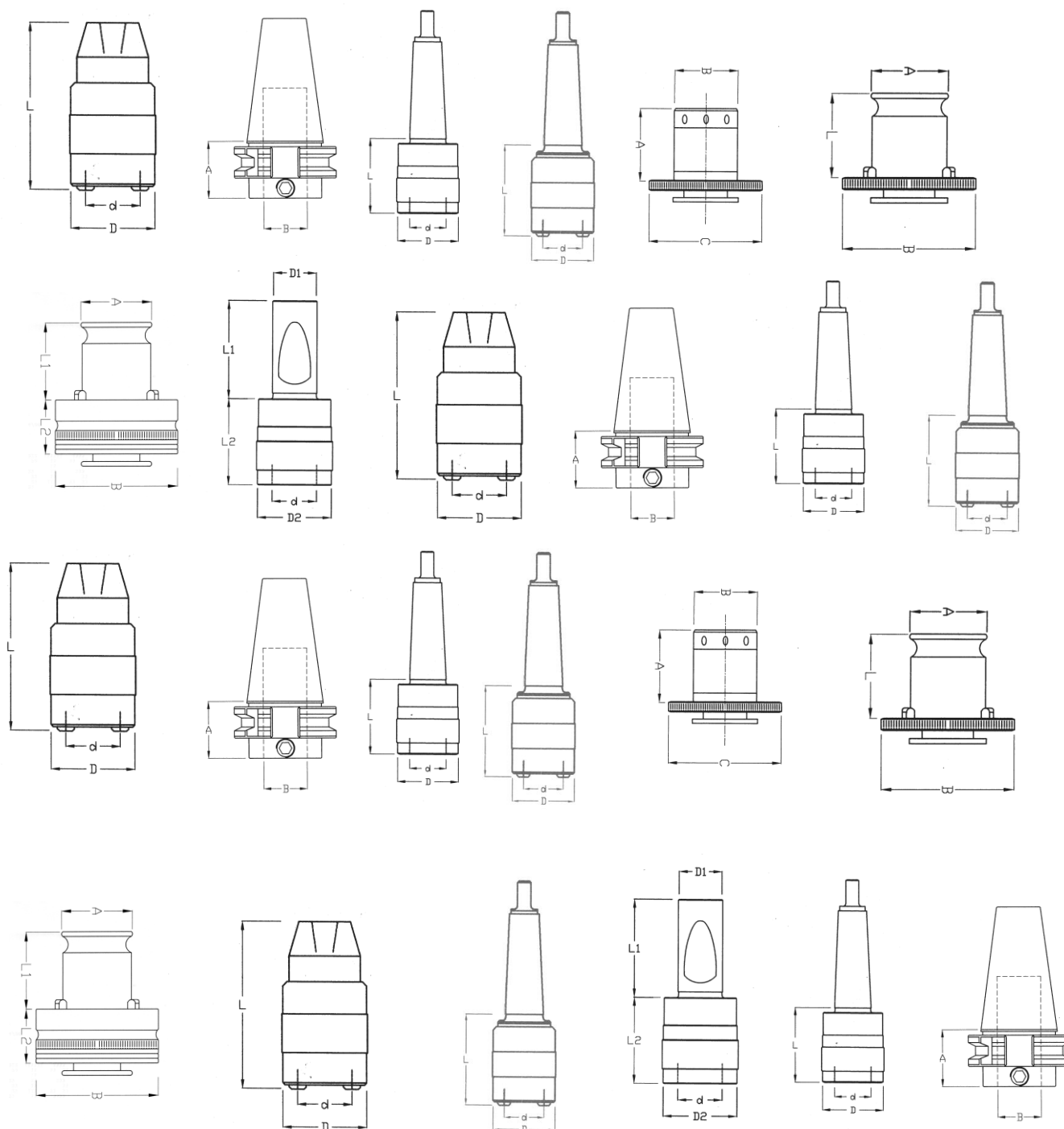
- No axial float
- Suitable for pitch controlled tapping cycle
- Available in different shanks against specific orders
- Suitable for coolant through applications

Code No.	Series	Tapping Range	d	D1 Shank Dia.	D2	L1	L2
TC150	# 1	0-5/8"	.748	1 inch	1.30	1.95	1.60
TC152	# 2	3/8-7/8"	1.220	1 inch	2.00	2.00	2.50

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This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



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