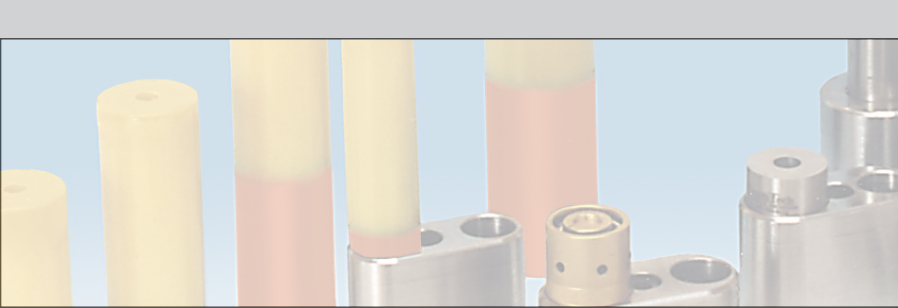


“Mini” Tog-L-Loc[®] Metal Joining & Hole Piercing Tools

Punches • Dies • Strippers • Punch Holders • Die Holders



Tog-L-Loc[®]
SHEET METAL JOINING SYSTEM

BTM[®]
CORPORATION
www.BTMcorp.com
810-364-4567



BTM's Mini Punch & Die Holders for 940 Series Tog-L-Loc® Sheet Metal Joining tools and Hole Piercing tools allow close center mounting and simplified tool building.

- 940 Tog-L-loc Mini Holders and Tooling See page 4
- 940 Tog-L-Loc Punch and Die Selection Guide See pages 5 & 6
- Ball-Lock Retention for Piercing Tools ~ Both Inch and Metric Sizes Available..... See page 7

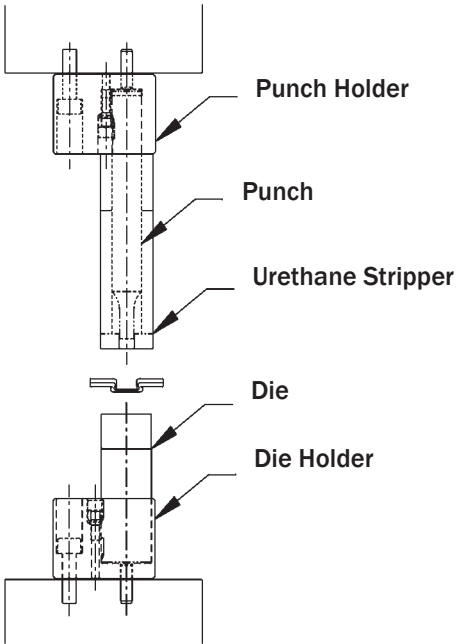
New Mini Holders mount on close centers.

Minimum Mounting Centers with Urethane Strippers

Punch Holder
3.0 Tog-L-Loc
MPH .375
MPH 10
Stripper Ø = 16mm (.63") Before Compression
Min. Center 20mm (.80")

Punch Holder
4.6 Tog-L-Loc
5.5 Tog-L-Loc
MPH .375
MPH 10
Stripper Ø = 20mm (.79") Before Compression
Min. Center 24.5mm (.96")

Punch Holder
6.4 Tog-L-Loc
MPH .500
MPH 13
Stripper Ø = 23mm (.91") Before Compression
Min. Center 29mm (1.14")



BTM's urethane stripper features a hard tip and base with a constant compression length for consistent force, regardless of the punch length. The small diameter allows closer spacing than is possible with spring stripper assemblies.

For more 940 Tog-L-Loc Tooling and Holder Styles Refer to the BTM catalog titled "Joining Metals with Stamping Dies"

The retaining method for BTM "940" tooling.

- Positive Location (No Springs)
- No Special Tools Required
- Easy Punch Removal
- The Simple Design Uses Few Parts

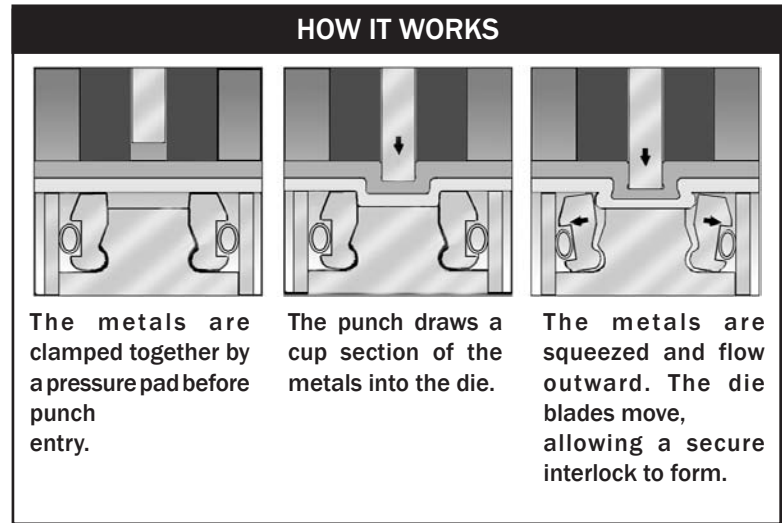
Precise Spherical Punch or Die Locator
Positive Screw Retention
The Punch is Extracted by the Screw

Patented Design



BTM's patented Tog-L-Loc® sheet metal joining system is used world wide by the automotive, appliance, electronics, building materials, and other industries.

- Joins plain, coated, and dissimilar metals.
- No rivets, screws or other fasteners.
- Eliminate spot welding operations.
- Long tool life; 300,000 joints common.
- Joins in a single press stroke.
- Strong and highly fatigue resistant.
- Non destructive checking with a simple gage.
- Leakproof joints.



TOOL SELECTION

1. Determine which joint size to use.

Joint strength increases with joint size. Force required to produce the joint also increases, as does the physical size of the tooling. The correct joint size for a given application is determined by the metal thickness, the strength required of each joint and accessibility of the joining site (clearance and/or flange width).

Joint Sizes:	3,0	4,6	5,5	6,4	
Example: 2 pieces of 1,0 mm (.040") Mild Steel (see pgs. 5&6 for more)					
Joint Size	3,0 (.12")	4,6 (.18")	5,5 (.22")	6,4 (.25")	
PEEL	445 N (100 lbs)	623 N (140 lbs)	689 N (155 lbs)	950 N (215 lbs)	
SHEAR	890 N (200 lbs)	1802 N (405 lbs)	2713 N (610 lbs)	3200 N (720 lbs)	

Nominal Force Required to Produce the Tog-L-Loc® Joint in Mild Steels:

(2 tons [17.8kN] for each 3,0 joint); (3 tons [26.7kN] for each 4,6 joint); (4 tons [35.6kN] for each 5,5 joint); (6 tons [53.4kN] for each 6,4 joint)

2. Choose the correct tool numbers from the charts.

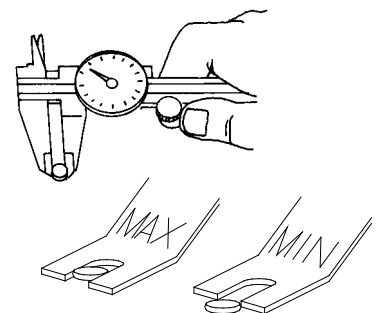
Tog-L-Loc® tools are "tuned" for the metals you will be joining. The charts on pages 5 & 6 reference joint size, metal thickness, and tool length. Various tool lengths allow access to different part configurations and die designs.

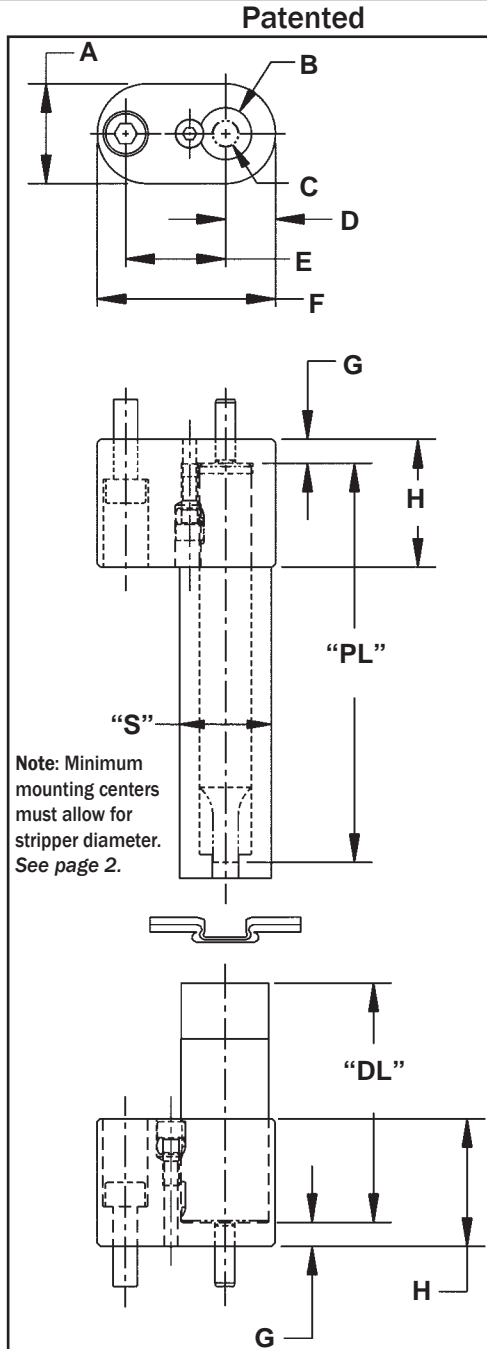
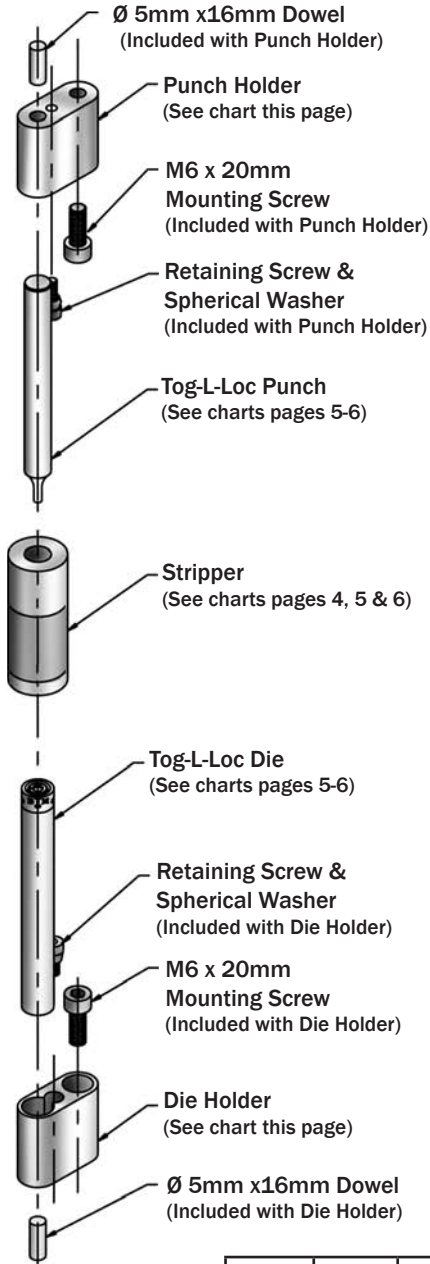
BTM offers consultation for tool selection, and will join sample parts and provide strength test results for your evaluation. A handling charge may be applied to this service. Contact BTM for details.

3. Quality Control.

Tog-L-Loc joints can be checked non-destructively by measuring the formed "button". Button dimension or "BD" is specified by BTM, and tolerance gages are available for simplified checking.

Measuring BD with a caliper or a BTM tolerance gage for non-destructive checking of joint quality.





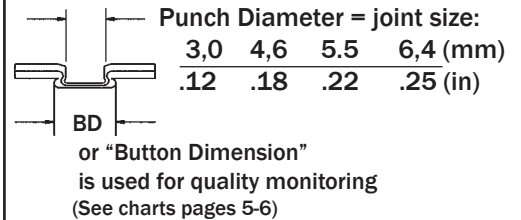
How To Order

1. Refer to pages 3, 5 & 6 to select the Tog-L-Loc punch and die for the metals to be joined. Part numbers reflect joint size and length of punch and die.
2. Choose punch & die holders and stripper from charts on pages 4-6 to suit the Tog-L-Loc punch & die.

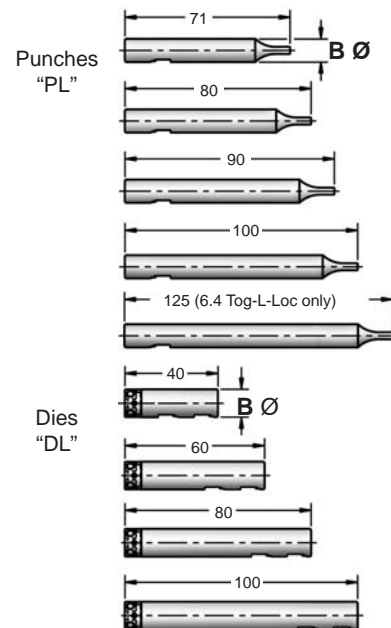
EXAMPLE

Qty	Description	BTM No.
20	Punch (4.6 PL = 80):	713900B
10	Punch Holder (B = Ø 10):	737400D
20	Stripper (4.6 PL = 80):	737405D
20	Die (4.6 DL = 60):	712700D
10	Die Holder (B = Ø 16):	737400C

Tog-L-Loc® Joint Sizes



Tog-L-Loc Punch & Die Lengths



	A	B	C	D	E	F	G	H	"S"
Punch Holder 3.0 737400B	15.0 (.59)	Ø 10H6	Ø 5F7	7.5 (.30)	22.50 (.886)	37.0 (1.46)	6.00 (.236)	32.00 (1.260)	Ø 16.0 (.63)
Punch Holder 4.6 737400D	15.0 (.59)	Ø 10H6	Ø 5F7	7.5 (.30)	22.50 (.886)	37.0 (1.46)	6.00 (.236)	32.00 (1.260)	Ø 20.0 (.79)
Punch Holder 5.5 737400D	15.0 (.59)	Ø 10H6	Ø 5F7	7.5 (.30)	22.50 (.886)	37.0 (1.46)	6.00 (.236)	32.00 (1.260)	Ø 20.0 (.79)
Punch Holder 6.4 737400F	25.0 (.98)	Ø 13H6	Ø 5F7	12.5 (.49)	25.00 (.886)	37.0 (1.76)	6.00 (.236)	32.00 (1.260)	Ø 23.0 (.91)
Die Holder 3.0 737400F	15.0 (.59)	Ø 12H6	Ø 5F7	7.5 (.30)	22.50 (.886)	37.0 (1.46)	6.00 (.236)	32.00 (1.260)	
Die Holder 4.6 737400C	19.0 (.75)	Ø 16H6	Ø 5F7	9.5 (.37)	22.50 (.886)	39.0 (1.54)	6.00 (.236)	32.00 (1.260)	
Die Holder 5.5 737400H	22.0 (.87)	Ø 19H6	Ø 5F7	11.0 (.43)	22.50 (.886)	40.5 (1.59)	6.00 (.236)	32.00 (1.260)	
Die Holder 6.4 737400E	25.0 (.98)	Ø 22H6	Ø 5F7	12.5 (.49)	25.00 (.984)	44.5 (1.75)	6.00 (.236)	32.00 (1.260)	

STRIPPERS FOR TOG-L-LOC® PUNCHES					
Joint Size	Punch Length				
	71mm	80mm	90mm	100mm	125mm
3.0	737413B	737414B	737415B	737416B	-
4.6	737404D	737405D	737406D	737407D	-
5.5	737403G	737404G	737405G	737406G	-
6.4	-	-	-	737406F	737407F



TOG-L-LOC® 940 Series ~ Punch & Die Selection Guide



3.0mm (.12") Tog-L-Loc®

Metal Thickness Punch Side	Metal Thickness Die Side	Punch Number ~ "B" = Ø 10mm				Die Number ~ "B" = Ø 12mm				Button Dimension "BD"	Shear Strength	Peel Strength	
		PL=71 2.795	PL=80 3.150	PL=90 3.543	PL=100 3.973	DL = 40 1.575	DL = 60 2.362	DL = 80 3.150	DL = 100 3.937				
0.3mm (.011")	0.3mm (.011")	713800A	713800B	713800C	713800D	712200DE	712300DE	712400DE	712500DE	4.1mm (.160")	267N (60lbs)	44N (10lbs)	
0.3mm (.013")	0.3mm (.013")	713800A	713800B	713800C	713800D	712200CE	712300CE	712400CE	712500CE	4.4mm (.175")	578N (130lbs)	67N (15lbs)	
0.5mm (.020")	0.5mm (.020")	713800A	713800B	713800C	713800D	712200DE	712300DE	712400DE	712500DE	4.4mm (.175")	778N (175lbs)	156N (35lbs)	
0.8mm (.032")	0.5mm (.020")	713800A	713800B	713800C	713800D	712200DE	712300DE	712400DE	712500DE	4.7mm (.185")	1290N (290lbs)	156N (35lbs)	
1.4mm (.054")	0.5mm (.020")	713800A	713800B	713800C	713800D	712200EE	712300EE	712400EE	712500EE	5.0mm (.195")	1401N (315lbs)	222N (50lbs)	
1.4mm (.057")	0.5mm (.020")	713800E	713800F	713800G	713800H	712200EE	712300EE	712400EE	712500EE	5.1mm (.200")	1649N (370lbs)	200N (45lbs)	
0.6mm (.024")	0.6mm (.024")	713800A	713800B	713800C	713800D	712200DE	712300DE	712400DE	712500DE	4.7mm (.185")	778N (175lbs)	222N (50lbs)	
0.8mm (.030")	0.6mm (.024")	713800A	713800B	713800C	713800D	712200DE	712300DE	712400DE	712500DE	4.7mm (.185")	979N (220lbs)	89N (20lbs)	
0.8mm (.030")	0.8mm (.030")	713800A	713800B	713800C	713800D	712200DE	712300DE	712400DE	712500DE	5.0mm (.195")	1001N (225lbs)	289N (65lbs)	
1.6mm (.062")	0.8mm (.030")	713800E	713800F	713800G	713800H	712200FE	712300FE	712400FE	712500FE	5.1mm (.200")	1868N (420lbs)	267N (60lbs)	
0.9mm (.036")	0.9mm (.036")	713800A	713800B	713800C	713800D	712200EE	712300EE	712400EE	712500EE	5.0mm (.195")	890N (200lbs)	267N (60lbs)	
1.4mm (.057")	0.9mm (.036")	713800E	713800F	713800G	713800H	712200FE	712300FE	712400FE	712500FE	5.3mm (.210")	1446N (325lbs)	423N (95lbs)	
1.0mm (.039")	1.0mm (.039")	713800B	713800B	713800C	713800D	712200FE	712300FE	712400FE	712500FE	5.0mm (.195")	890N (200lbs)	356N (80lbs)	
1.0mm (.040")	1.0mm (.040")	713800B	713800B	713800C	713800D	712200FE	712300FE	712400FE	712500FE	5.1mm (.200")	890N (200lbs)	445N (100lbs)	
1.4mm (.057")	1.0mm (.040")	713800F	713800F	713800G	713800H	712200FE	712300FE	712400FE	712500FE	5.1mm (.200")	1890N (425lbs)	467N (105lbs)	
1.5mm (.060")	1.0mm (.040")	713800F	713800F	713800G	713800H	712200FE	712300FE	712400FE	712500FE	5.3mm (.210")	1557N (425lbs)	400N (90lbs)	
1.2mm (.048")	1.2mm (.048")	713800B	713800B	713800C	713800D	712200FE	712300FE	712400FE	712500FE	5.2mm (.205")	1157N (260lbs)	512N (115lbs)	
"S" Stripper Number		737413B	737414B	737415B	737416B								

4.6mm (.18") Tog-L-Loc®

Metal Thickness Punch Side	Metal Thickness Die Side	Punch Number ~ "B" = Ø 10mm				Die Number ~ "B" = Ø 16mm				Button Dimension "BD"	Shear Strength	Peel Strength
		PL=71 2.795	PL=80 3.150	PL=90 3.543	PL=100 3.973	DL = 40 1.575	DL = 60 2.362	DL = 80 3.150	DL = 100 3.937			
1.1mm (.043")	0.3mm (.010")	713900A	713900B	713900C	713900D	712600EE	712700EE	712800EE	712900EE	6.4mm (.250")	1001N (225lbs)	89N (20lbs)
0.5mm (.020")	0.5mm (.020")	713900A	713900B	713900C	713900D	712600DE	712700DE	712800DE	712900DE	6.4mm (.250")	1446N (325lbs)	200N (45lbs)
1.0mm (.040")	0.5mm (.020")	713900E	713900F	713900C	713900H	712600EE	712700EE	712800EE	712900EE	6.9mm (.250")	2002N (450lbs)	334N (75lbs)
1.2mm (.032")	0.5mm (.020")	713900E	713900F	713900G	713900H	712600EE	712700EE	712800EE	712900EE	6.9mm (.270")	2402N (540lbs)	267N (60lbs)
0.6mm (.024")	0.6mm (.024")	713900A	713900B	713900G	713900D	712600EE	712700EE	712800EE	712900EE	6.6mm (.260")	1512N (340lbs)	378N (85lbs)
0.8mm (.031")	0.6mm (.024")	713900A	713900B	713900C	713900D	712600EE	712700EE	712800EE	712900EE	6.7mm (.265")	1868N (420lbs)	334N (75lbs)
1.0mm (.040")	0.6mm (.024")	713900A	713900B	713900C	713900D	712600EE	712700EE	712800EE	712900EE	6.9mm (.270")	2380N (535lbs)	356N (80lbs)
1.2mm (.048")	0.6mm (.024")	713900A	713900B	713900C	713900D	712600EE	712700EE	712800EE	712900EE	7.0mm (.275")	2891N (650lbs)	311N (70lbs)
1.5mm (.058")	0.6mm (.024")	713900A	713900B	713900C	713900D	712600GE	712700GE	712800GE	712900GE	7.1mm (.280")	2624N (.590lbs)	423N (70lbs)
0.8mm (.030")	0.8mm (.030")	713900A	713900B	713900C	713900D	712600EE	712700EE	712800EE	712900EE	6.7mm (.265")	2180N (490lbs)	423N (95lbs)
1.1mm (.045")	0.8mm (.030")	713900A	713900B	713900C	713900D	712600FE	712700FE	712800FE	712900FE	7.1mm (.280")	2246N (505lbs)	378N (85lbs)
1.2mm (.048")	0.8mm (.030")	713900A	713900B	713900C	713900D	712600FE	712700FE	712800FE	712900FE	7.1mm (.280")	2113N (475lbs)	400N (90lbs)
1.5mm (.058")	0.8mm (.030")	713900E	713900F	713900G	713900H	712600GE	712700GE	712800GE	712900GE	7.1mm (.280")	2869N (645lbs)	378N (85lbs)
2.0mm (.080")	0.8mm (.030")	713900E	713900F	713900G	713900H	712600GE	712700GE	712800GE	712900GE	7.4mm (.290")	3559N (800lbs)	423N (95lbs)
0.9mm (.035")	0.9mm (.035")	713900A	713900B	713900C	713900D	712600EE	712700EE	712800EE	712900EE	6.9mm (.270")	2202N (495lbs)	445N (100lbs)
2.6mm (.102")	0.9mm (.037")	713900E	713900F	713900G	713900H	712600JE	712700JE	712800JE	712900JE	7.5mm (.294")	4270N (960lbs)	979N (220lbs)
1.0mm (.040")	1.0mm (.040")	713900A	713900B	713900C	713900D	712600GE	712700GE	712800GE	712900GE	7.1mm (.280")	1802N (405lbs)	623N (140lbs)
1.4mm (.057")	1.0mm (.040")	713900E	713900F	713900G	713900H	712600HE	712700HE	712800HE	712900HE	7.4mm (.290")	2825N (635lbs)	667N (150lbs)
2.1mm (.084")	1.0mm (.041")	713900E	713900F	713900G	713900H	712600JE	712700JE	712800JE	712900JE	7.5mm (.295")	3336N (750lbs)	667N (150lbs)
0.8mm (.030")	1.1mm (.042")	713900A	713900B	713900C	713900D	712600EE	712700EE	712800EE	712900EE	6.9mm (.270")	1401N (315lbs)	667N (150lbs)
0.5mm (.020")	1.1mm (.044")	713900A	713900B	713900C	713900D	712600DE	712700DE	712800DE	712900DE	6.9mm (.270")	1068N (240lbs)	356N (80lbs)
1.4mm (.055")	1.2mm (.046")	713900E	713900F	713900G	713900H	712600JE	712700JE	712800JE	712900JE	7.5mm (.295")	2024N (455lbs)	823N (185lbs)
0.6mm (.023")	1.2mm (.047")	713900A	713900B	713900C	713900D	712600DE	712700DE	712800DE	712900DE	6.9mm (.270")	1068N (240lbs)	245N (55lbs)
2.0mm (.080")	1.2mm (.047")	713900E	713900F	713900G	713900H	712600JE	712700JE	712800JE	712900JE	7.5mm (.295")	4159N (935lbs)	1245N (280lbs)
1.2mm (.048")	1.2mm (.048")	713900A	713900B	713900C	713900D	712600GE	712700GE	712800GE	712900GE	7.0mm (.275")	2291N (515lbs)	689N (155lbs)
1.5mm (.058")	1.2mm (.048")	713900E	713900F	713900G	713900H	712600HE	712700HE	712800HE	712900HE	7.4mm (.290")	2291N (515lbs)	890N (200lbs)

Continued on page 6.

1.2mm (.047")	1.4mm (.055")	713900E	713900F	713900G	713900H	712600FE	712700FE	712800FE	712900FE	7.2mm (.285")	2224N (500lbs)	734N (165lbs)
1.1mm (.044")	1.4mm (.057")	713900A	713900B	713900C	713900D	712600EE	712700EE	712800EE	712900EE	7.4mm (.290")	1824N (410lbs)	467N (105lbs)
0.6mm (.024")	1.5mm (.059")	713900E	713900F	713900G	713900H	712600EE	712700EE	712800EE	712900EE	7.1mm (.280")	1179N (265lbs)	311N (70lbs)
0.8mm (.030")	1.5mm (.060")	713900E	713900F	713900G	713900H	712600FE	712700FE	712800FE	712900FE	7.1mm (.280")	1379N (310lbs)	356N (80lbs)
1.0mm (.040")	1.5mm (.060")	713900A	713900B	713900C	713900D	712600EE	712700EE	712800EE	712900EE	7.4mm (.290")	1579N (355lbs)	445N (100lbs)
1.5mm (.060")	1.5mm (.060")	713900E	713900F	713900G	713900H	712600JE	712700JE	712800JE	712900JE	7.0mm (.275")	2802N (630lbs)	1023N (230lbs)
2.0mm (.080")	1.5mm (.060")	713900E	713900F	713900G	713900H	712600JE	712700JE	712800JE	712900JE	7.5mm (.295")	3003N (675lbs)	1379N (310lbs)
1.7mm (.066")	1.7mm (.066")	713900E	713900F	713900G	713900H	712600KE	712700KE	712800KE	712900KE	7.1mm (.280")	2357N (530lbs)	1001N (225lbs)
1.8mm (.070")	1.8mm (.070")	713900E	713900F	713900G	713900H	712600KE	712700KE	712800KE	712900KE	7.5mm (.295")	2402N (540lbs)	1023N (230lbs)
1.9mm (.075")	1.9mm (.075")	713900E	713900F	713900G	713900H	712600HE	712700HE	712800HE	712900HE	7.1mm (.280")	3447N (775lbs)	978N (220lbs)
1.4mm (.057")	1.9mm (.076")	713900E	713900F	713900G	713900H	712600GE	712700GE	712800GE	712900GE	7.2mm (.285")	1824N (410lbs)	689N (155lbs)
0.9mm (.036")	2.0mm (.078")	713900E	713900F	713900G	713900H	712600EE	712700EE	712800EE	712900EE	7.4mm (.290")	1045N (235lbs)	378N (85lbs)
1.1mm (.044")	2.0mm (.078")	713900E	713900F	713900G	713900H	712600FE	712700FE	712800FE	712900FE	7.4mm (.290")	2046N (460lbs)	689N (155lbs)
1.2mm (.048")	2.0mm (.078")	713900E	713900F	713900G	713900H	712600FE	712700FE	712800FE	712900FE	7.4mm (.290")	1824N (410lbs)	667N (150lbs)
2.0mm (.080")	2.0mm (.080")	713900E	713900F	713900G	713900H	712600JE	712700JE	712800JE	712900JE	7.5mm (.295")	2802N (630lbs)	1223N (275lbs)
1.5mm (.060")	2.5mm (.098")	713900E	713900F	713900G	713900H	712600JE	712700JE	712800JE	712900JE	7.4mm (.290")	2135N (480lbs)	667N (150lbs)

"S" Stripper Number 737404D 737405D 737406D 737407D

5.5mm (.22") Tog-L-Loc®

Metal Thickness Punch Side	Metal Thickness Die Side	Punch Number ~ "B" = Ø 10mm				Die Number ~ "B" = Ø 19mm				Button Dimension "BD"	Shear Strength	Peel Strength
		PL=71 2.795	PL=80 3.150	PL=90 3.543	PL=100 3.973	DL = 40 1.575	DL = 60 2.362	DL = 80 3.150	DL = 100 3.937			
1.1mm (.045")	0.8mm (.030")	739000A	739000C	739000E	739000G	742300EE	742400EE	742500EE	742600EE	8.4mm (.330")	3158N (710lbs)	400N (90lbs)
1.2mm (.048")	0.8mm (.030")	739000A	739000C	739000E	739000G	742300HE	742400HE	742500HE	742600HE	8.4mm (.330")	2713N (610lbs)	534N (120lbs)
1.0mm (.040")	1.0mm (.040")	739000A	739000C	739000E	739000G	742300FE	742400FE	742500FE	742600FE	8.3mm (.325")	2713N (610lbs)	689N (155lbs)
1.4mm (.057")	1.0mm (.040")	739000B	739000D	739000F	739000H	742300GE	742400GE	742500GE	742600GE	8.3mm (.325")	3447N (775lbs)	712N (160lbs)
2.3mm (.090")	2.3mm (.090")	739000B	739000D	739000F	739000H	742300KE	742400KE	742500KE	742600KE	9.1mm (.360")	3692N (830lbs)	1579N (355lbs)
3.3mm (.128")	2.8mm (.112")	739000A	739000C	739000E	739000G	742300LE	742400LE	742500LE	742600LE	8.9mm (.350")	5471N (1230lbs)	934N (210lbs)
2.8mm (.112")	3.3mm (.128")	739000A	739000C	739000E	739000G	742300LE	742400LE	742500LE	742600LE	9.1mm (.360")	3714N (835lbs)	756N (170lbs)

"S" Stripper Number 737403G 737404G 737405G 737406G

6.4mm (.22") Tog-L-Loc®

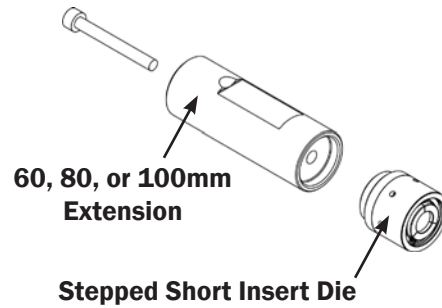
Metal Thickness Punch Side	Metal Thickness Die Side	Punch Number ~ "B" = Ø 13mm		Die Number ~ "B" = Ø 22mm			Button Dimension "BD"	Shear Strength	Peel Strength
		PL=100 3.937	PL=125 4.921	DL = 60 2.362	DL = 80 3.150	DL = 100 3.937			
0.7mm (.028")	0.7mm (.028")	PD201200A	PD201200B	751200EE	751200EE	751200EE	9.4mm (.370")	2669N (600lbs)	512N (115lbs)
0.8mm (.032")	0.8mm (.032")	PD201200A	PD201200B	751200EE	751200EE	751200EE	9.3mm (.365")	2624N (590lbs)	534N (120lbs)
2.6mm (.102")	1.0mm (.040")	PD201200C	PD201200D	751200JE	751200JE	751200JE	10.3mm (.405")	6828N (1535lbs)	823N (185lbs)
1.1mm (.044")	1.1mm (.044")	PD201200A	PD201200B	751200FE	751200FE	751200FE	9.8mm (.385")	3247N (730lbs)	890N (200lbs)
1.1mm (.045")	1.1mm (.045")	PD201200A	PD201200B	751200EE	751200EE	751200EE	9.7mm (.380")	3737N (840lbs)	801N (180lbs)
1.9mm (.076")	1.1mm (.045")	PD201200C	PD201200D	751200JE	751200JE	751200JE	9.8mm (.385")	5338N (1200lbs)	712N (160lbs)
1.2mm (.046")	1.2mm (.046")	PD201200C	PD201200D	751200FE	751200FE	751200FE	9.7mm (.380")	3425N (770lbs)	956N (215lbs)
1.2mm (.048")	1.2mm (.048")	PD201200C	PD201200D	751200GE	751200GE	751200GE	9.8mm (.385")	3714N (835lbs)	1001N (225lbs)
1.3mm (.050")	1.3mm (.050")	PD201200C	PD201200D	751200GE	751200GE	751200GE	9.8mm (.385")	3981N (895lbs)	1045N (235lbs)
1.9mm (.076")	1.4mm (.057")	PD201200C	PD201200D	751200HE	751200HE	751200HE	10.3mm (.405")	4938N (1110lbs)	1357N (305lbs)
2.0mm (.080")	1.5mm (.059")	PD201200C	PD201200D	751200JE	751200JE	751200JE	9.9mm (.390")	7228N (1625lbs)	1957N (440lbs)
2.3mm (.090")	1.5mm (.059")	PD201200C	PD201200D	751200JE	751200JE	751200JE	9.9mm (.390")	5516N (1240lbs)	2135N (480lbs)
1.8mm (.070")	1.8mm (.070")	PD201200C	PD201200D	751200HE	751200HE	751200HE	10.2mm (.400")	4337N (975lbs)	1357N (305lbs)
1.9mm (.073")	1.9mm (.073")	PD201200C	PD201200D	751200HE	751200HE	751200HE	10.0mm (.395")	5360N (1205lbs)	1223N (275lbs)
2.7mm (.107")	2.0mm (.077")	PD201200C	PD201200D	751200JE	751200JE	751200JE	10.7mm (.420")	6116N (1375lbs)	1757N (395lbs)
2.0mm (.080")	2.0mm (.080")	PD201200C	PD201200D	751200JE	751200JE	751200JE	10.5mm (.415")	4204N (945lbs)	1535N (345lbs)
1.4mm (.057")	2.3mm (.090")	PD201200C	PD201200D	751200FE	751200FE	751200FE	10.4mm (.410")	3003N (675lbs)	1112N (250lbs)
1.9mm (.075")	2.4mm (.094")	PD201200C	PD201200D	751200HE	751200HE	751200HE	10.7mm (.420")	3781N (850lbs)	1201N (270lbs)
3.3mm (.128")	2.5mm (.097")	PD201200C	PD201200D	751200JE	751200JE	751200JE	10.8mm (.425")	6672N (1500lbs)	2002N (450lbs)
2.5mm (.100")	2.5mm (.100")	PD201200C	PD201200D	751200JE	751200JE	751200JE	10.9mm (.430")	4671N (1050lbs)	1401N (315lbs)
2.6mm (.101")	2.6mm (.101")	PD201200C	PD201200D	751200JE	751200JE	751200JE	10.9mm (.430")	4782N (1075lbs)	2224N (500lbs)
1.6mm (.064")	2.6mm (.104")	PD201200C	PD201200D	751200FE	751200FE	751200FE	10.5mm (.415")	3114N (700lbs)	912N (205lbs)
3.0mm (.120")	3.0mm (.120")	PD201200C	PD201200D	751200JE	751200JE	751200JE	10.8mm (.425)	5382N (1210lbs)	1779N (400lbs)

"S" Stripper Number 737406F 737407F Extensions
 PD214700B PD214700C PD214700D

← An extension must be ordered to achieve the desired die length with 6.4mm (.25") tooling.
See P. 7 for more information.

NOTE REGARDING 6.4 DIE EXTENSIONS:

6,4mm (.25") Tog-L-Loc® dies are stepped short insert dies, and require an extension to achieve the required length. See the chart on page 6 for ordering information.



“Mini” Ball-Lock Holders for Piercing Tools

Ball-Lock Mini Punch Holders

	Inch Series	Metric Series
	737400N MPH .375	737400J MPH 10
A	Ø .3752	Ø 10H6
B	1.56	42.0
C	.81	22.0
D	.2188	6.500
E	.30	7.5
F	.5938	17.000
G	.938	26.00
H	.250	6.00
J	1.25	32.0
K	Ø 3/16 x 5/8	Ø 5 x 16
L	5/16 - 18 x 1/4	M8 x 25

See Note *

Ball-Lock Mini Punch or Die Holders

	Inch Series			Metric Series		
	737400P MPH .500	737400R MPH .750	737400S MPH 1.000		737400L MPH 20	737400M MPH 25
A	Ø .5002	Ø .7502	Ø 1.0002	Ø 13 H6	Ø 20 H6	Ø 25 H6
B	1.75	2.16	2.47	46.0	57.5	63.0
C	1.00	1.06	1.25	26.0	27.0	32.0
D	.3125	.3438	.4375	8.000	8.500	11.00
E	.3125	.3438	.4375	8.000	8.500	11.00
F	.41	.52	.61	9.5	13.0	15.6
G	.3125	.4688	.5625	8.000	12.000	14.500
H	.7500	.9375	1.0000	19.000	24.000	26.000
J	1.031	1.281	1.375	27.50	34.00	35.00
K	Ø .31	Ø .50	Ø .62	Ø 6.4	Ø 12.0	Ø 16
L	.250	.250	.250	6.00	6.00	6.00
M	1.25	1.25	1.25	32.0	32.0	32.0
N	Ø 1/4 x 3/4	Ø 1/4 x 3/4	Ø 1/4 x 3/4	Ø 6 x 20	Ø 6 x 20	Ø 6 x 20
P	5/16 - 18 x 1/4	3/8 - 16 x 1/4	1/2 - 13 x 1/2	M8 x 25	M10 x 30	M12 x 35

NOTE: Piercing Punches and Dies may be ordered direct from BTM’s subsidiary: Punch Tech
Tel: (810) 364 6030
Fax: (810) 364 9170

***NOTE:** Pierce Punches must be ordered in the same lengths as the Tog-L-Loc Punches to match the same stripper lengths.

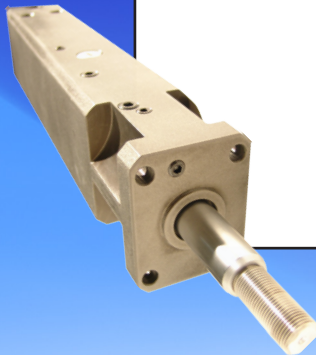
BTM[®] CORPORATION

BTM has a wide range of products to meet your needs including
(but definitely not limited to):



Air Powered Toggle Presses

- Available in 1, 2, 5, 10, 20, and 40 ton models
- Hard Coat Aluminum Construction
- Few Moving Parts
- Patented THIN design allows for close stacking



Air/Oil Cylinders

- Available in 3, 5, 12, 18, 26, & 34 Ton capacities
- Operates with air - no hydraulic power unit required
- Easy to setup - uses shop air and standard pneumatic valves



Universal Hydraulic Presses

- Available in a Fixed Frame or Inclinable Frame
- Features a programmable logic controller
- Dual Foot Pedal allows operator to use both hands

For more information, or to see our full line of products, please visit:

WWW.BTMcorp.COM