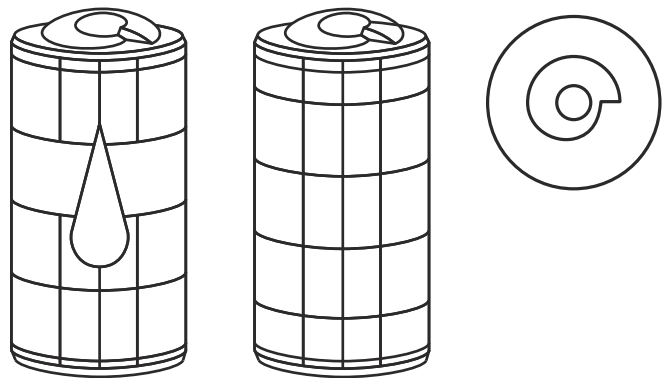
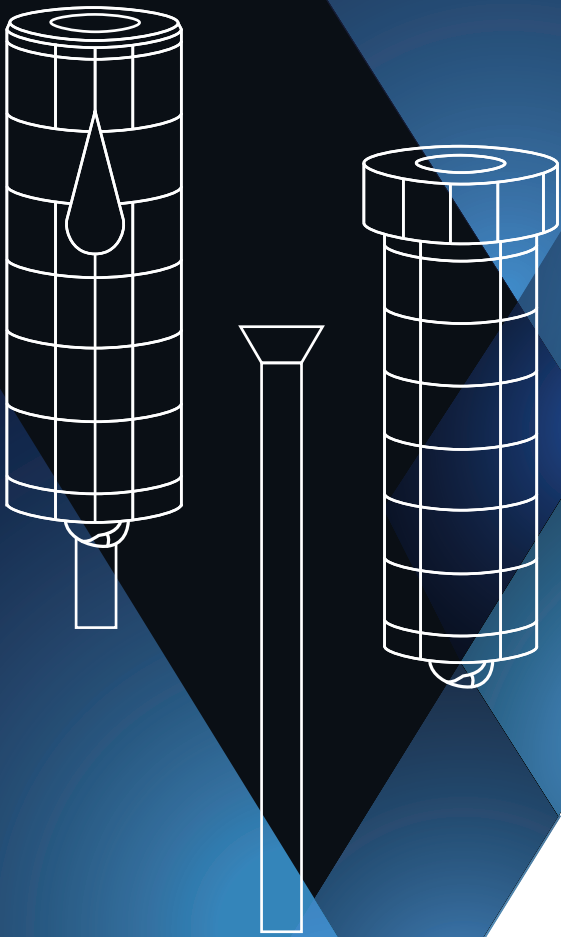


tipco»



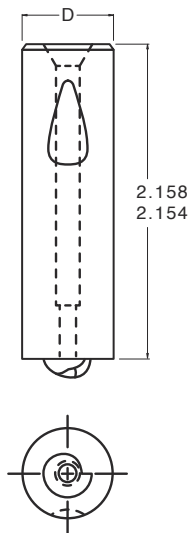
TIPCO
THREAD FORM TOOLS
www.tipcopunch.com

Thread Form Ball Lock & Basic Tools - How to Order

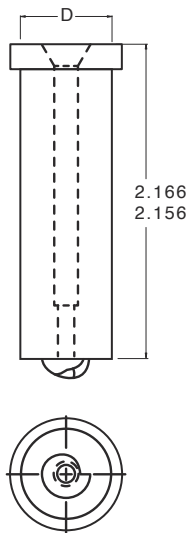
Please specify Catalog Number

FORM PUNCH

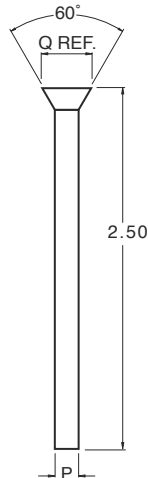
BALL LOCK



BASIC

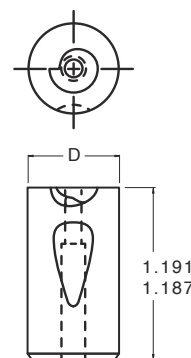


PIERCE PUNCH

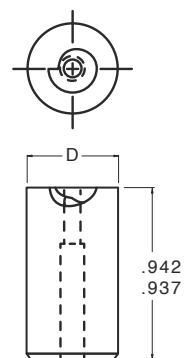


DIE BUTTON

BALL LOCK



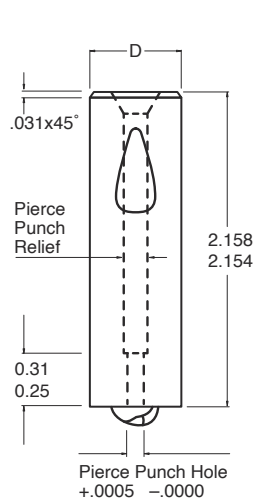
BASIC



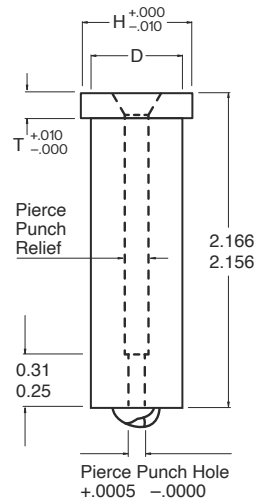
Pre-Engineered Thread Form Set Includes:
Form Punch, Pierce Punch, and Die Button.

SCREW TYPE	THREAD SIZE	FORM SET		FORM PUNCH		PIERCE PUNCH	DIE BUTTON		DIA. Ø
		BALL LOCK	BASIC	BALL LOCK	BASIC		BALL LOCK	BASIC	
A 	6-18	6-18-LBTS	6-18-TS	803-LBTP	TP-6A	8031-P	813-LBTD	TD-66A	.375
	8-15	8-15-LBTS	8-15-TS	804-LBTP	TP-8A	8042-P	814-LBTD	TD-8A	.500
	10-12	10-12-LBTS	10-12-TS	824-LBTP	TP-10A	8243-P	834-LBTD	TD-10A	.500
	12-11	12-11-LBTS	12-11-TS	845-LBTP	TP-12A	8454-P	855-LBTD	TD-12A	.625
	14-10	14-10-LBTS	14-10-TS	865-LBTP	TP-14A	8655-P	875-LBTD	TD-14A	.625
B 	20-9	20-9-LBTS	20-9-TS	886-LBTP	TP-20A	8866-P	896-LBTD	TD-20A	.750
	6-20	6-20-LBTS	6-20-TS	1803-LBTP	TP-6B	18031-P	1813-LBTD	TD-6B	.625
	8-18	8-18-LBTS	8-18-TS	1804-LBTP	TP-8B	18042-P	1814-LBTD	TD-8B	.500
	10-16	10-16-LBTS	10-16-TS	1824-LBTP	TP-10B	18243-P	1834-LBTD	TD-10B	.500
AB 	12-14	12-14-LBTS	12-14-TS	1845-LBTP	TP-12B	18454-P	1855-LBTD	TD-12B	.625
	1/4-14	1/4-14-LBTS	1/4-14-TS	1865-LBTP	TP-14B	18655-P	1875-LBTD	TD-1/4B	.625
	5/16-12	5/16-12-LBTS	5/16-12-TS	1886-LBTP	TP-20B	18866-P	1896-LBTD	TD-5/16B	.750
C MACHINE SCREW 	6-32	6-32-LBTS	6-32-TS	2803-LBTP	TP-6C	28031-P	2813-LBTD	TD-6C	.375
	8-32	8-32-LBTS	8-32-TS	2804-LBTP	TP-8C	28042-P	2814-LBTD	TD-8C	.500
	10-24	10-24-LBTS	10-24-TS	2824-LBTP	TP-10C	28243-P	2834-LBTD	TD-10C	.500
	10-32	10-32-LBTS	10-32-TS	2845-LBTP	TP-10CF	28454-P	2855-LBTD	TD-10CF	.625
	1/4-20	1/4-20-LBTS	1/4-20-TS	2865-LBTP	TP-1/4C	28655-P	2875-LBTD	TD-1/4C	.625
	5/16-18	5/16-18-LBTS	5/16-18-TS	2886-LBTP	TP-5/16C	28866-P	2896-LBTD	TD-5/16C	.750

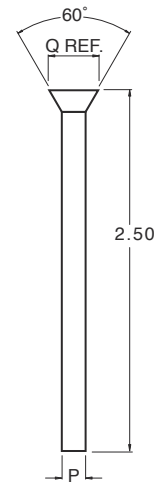
Thread Form Punch



BALL LOCK



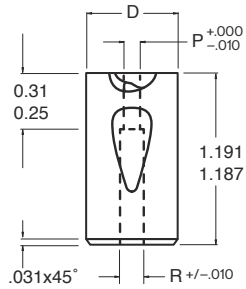
BASIC



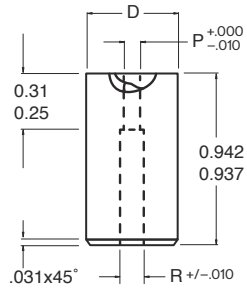
PIERCE PUNCH

SHANK Ø D1	BALL LOCK PUNCH		BASIC PUNCH			THREAD SIZE	HOLE Ø	RELIEF Ø	SINK Ø C	PIERCE PUNCH	
	SHANK Ø D1 ACTUAL	BALL SIZE	SHANK Ø D1 ACTUAL	HEAD Ø D2	HEAD THICK.					DIA. P	DIA. Q
.375	.3748 / .3746	.250	.3755 / .3752	.500	.1875	6-18	.1045	.166	.188	.104	.188
						6-20	.1075	.120	.193	.107	.193
						6-32	.1155	.125	.208	.115	.208
.500	.4998 / .4996	.3125	.5005 / .5002	.625	.1875	8-15	.1205	.136	.217	.120	.217
						8-18	.1205	.136	.217	.120	.217
						8-32	.1415	.156	.255	.141	.255
						10-12	.1285	.141	.231	.128	.231
						10-16	.1385	.150	.250	.138	.250
.625	.6248 / .6246	.3125	.6255 / .6252	.750	.250	10-24	.1605	.172	.289	.160	.289
						10-32	.1675	.187	.302	.167	.302
						12-11	.1564	.166	.282	.156	.282
						12-14	.1585	.170	.286	.158	.286
						14-10	.1805	.191	.325	.180	.325
						1/4-14	.1885	.201	.340	.188	.340
.750	.7498 / .7496	.375	.7505 / .7502	.875	.250	1/4-20	.2135	.234	.385	.213	.385
						20-9	.2315	.242	.418	.231	.418
						5/16-12	.2415	.250	.436	.241	.436
						5/16-18	.2725	.281	.492	.272	.492

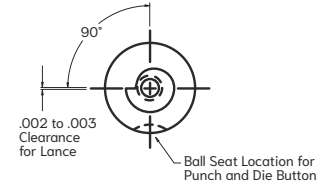
Thread Form Die Button



BALL LOCK

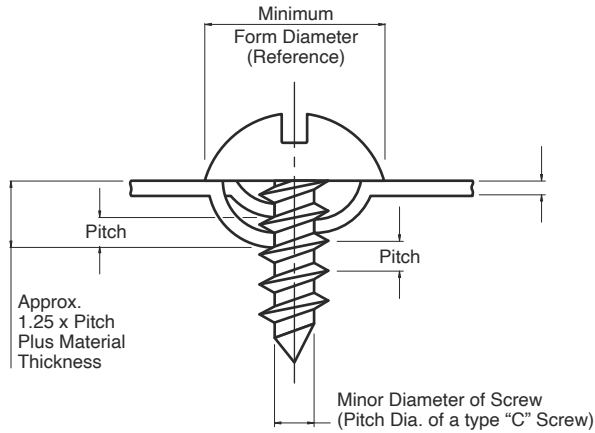


BASIC



SHANK Ø D1	BALL LOCK DIE BUTTON		BASIC DIE BUTTON		THREAD SIZE	DIA. P	DIA. R
	SHANK Ø D1 ACTUAL	BALL SIZE	SHANK Ø D1 ACTUAL				
.375	.3748 / .3746	.250	.3758 / .3755		6-18	.108	.141
					6-20	.111	.141
					6-32	.118	.136
.500	.4998 / .4996	.3125	.5008 / .5005		8-15	.125	.166
					8-18	.125	.166
					8-32	.144	.156
					10-12	.134	.173
					10-16	.142	.173
					10-24	.164	.177
.625	.6248 / .6246	.3125	.6264 / .6260		10-32	.171	.188
					12-11	.162	.196
					12-14	.162	.196
					14-10	.187	.228
					1/4-14	.192	.228
					1/4-20	.218	.234
.750	.7498 / .7496	.375	.7514 / .7510		20-9	.238	.281
					5/16-12	.245	.281
					5/16-18	.277	.290

THREAD FORM DATA



A



B



AB

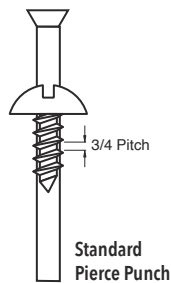
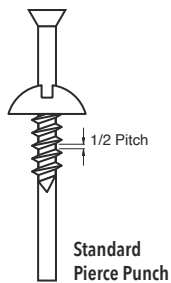


C MACHINE SCREW

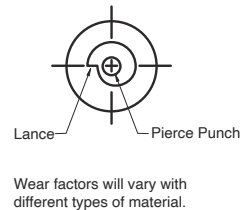
THREAD SIZE	MATERIAL THICKNESS	PITCH (REF)	MAXIMUM MINOR DIA. OF SCREW	MINIMUM FORM DIAMETER
TYPE A SCREWS				
6-18	.020 – .030	.0556	.102	.276
8-15	.025 – .040	.0667	.123	.306
10-12	.030 – .045	.0833	.133	.352
12-11	.035 – .054	.0909	.162	.406
14-10	.038 – .060	.1000	.185	.442
20-9	.050 – .060	.1111	.234	.556
TYPE B & TYPE AB SCREWS				
6-20	.020 – .030	.0500	.104	.208
8-18	.020 – .030	.0556	.122	.296
10-16	.020 – .030	.0625	.141	.374
12-14	.030 – .040	.0714	.164	.400
1/4-14	.030 – .040	.0714	.192	.400
5/16-12	.030 – .040	.0833	.244	.552
TYPE C SCREWS				
6-32	.010 – .020	.0313	.118	.290
8-32	.010 – .020	.0313	.144	.324
10-24	.015 – .025	.0417	.163	.370
10-32	.010 – .020	.0313	.170	.348
1/4-20	.020 – .030	.0500	.218	.478
5/16-18	.020 – .030	.0556	.276	.490

EXCESSIVE MATERIAL THICKNESS RECOMMENDED SOLUTIONS

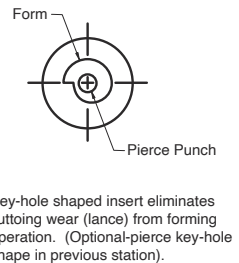
1. Revise screw thread specifications (preferred). Substitute a screw with a "pitch" suitable for material thickness.
2. Enlarge center hole by enlarging pierce punch size.



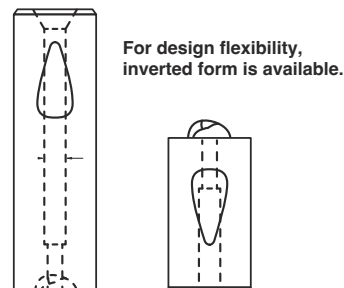
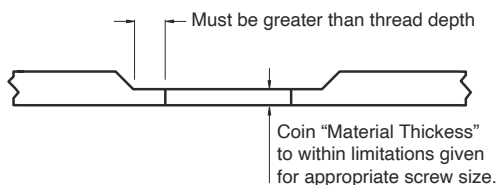
With Lance
For 200,000 Pieces or less.



Without Lance
Suggested for greater than 200,000 pieces.



3. Thin material in a previous station.





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