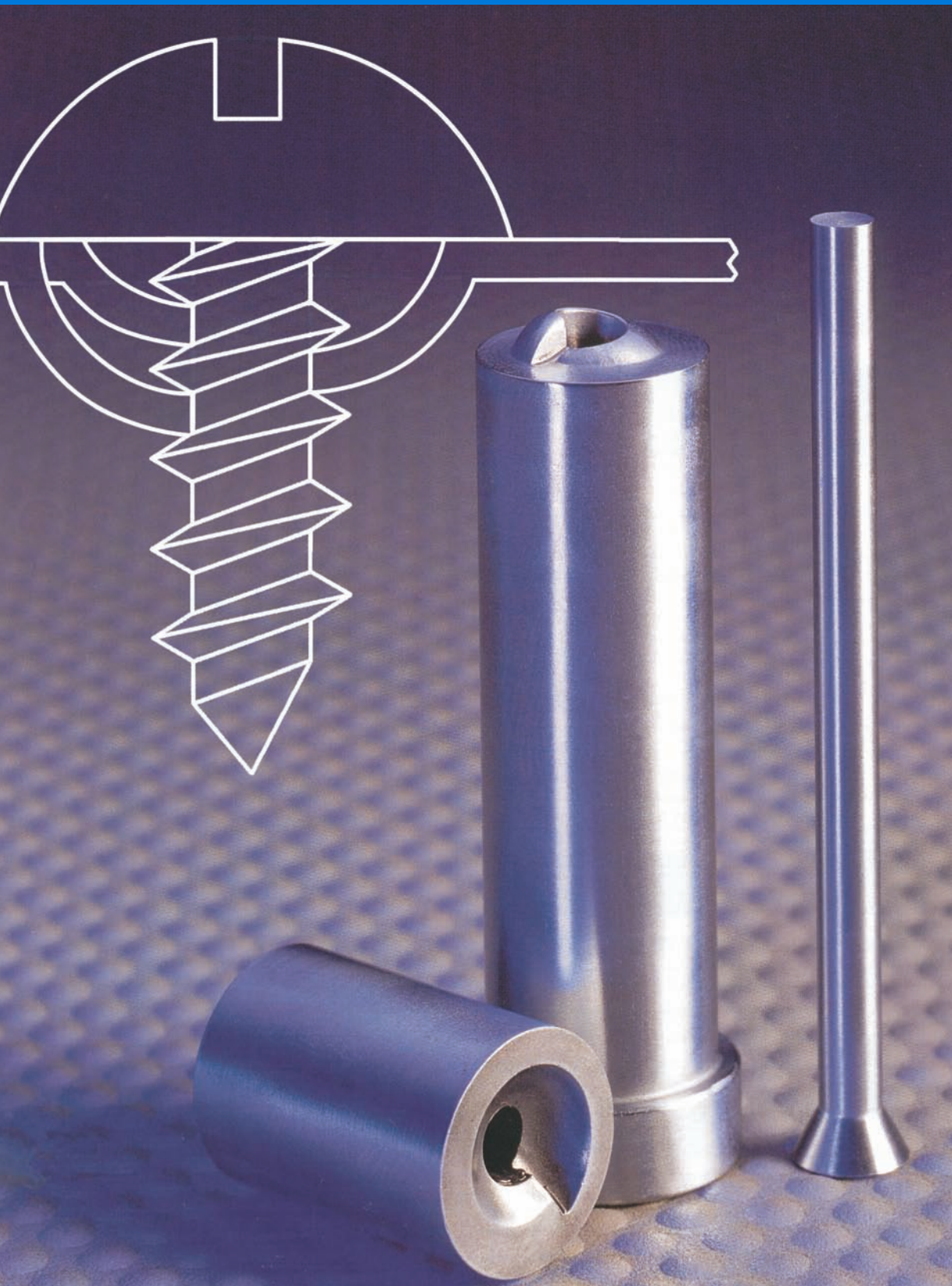




**Anchor Danly
Punchrite®**

TRUSTED SOLUTIONS AND INNOVATION

THREAD FORMS



BALL LOCK AND BASIC TOOLS

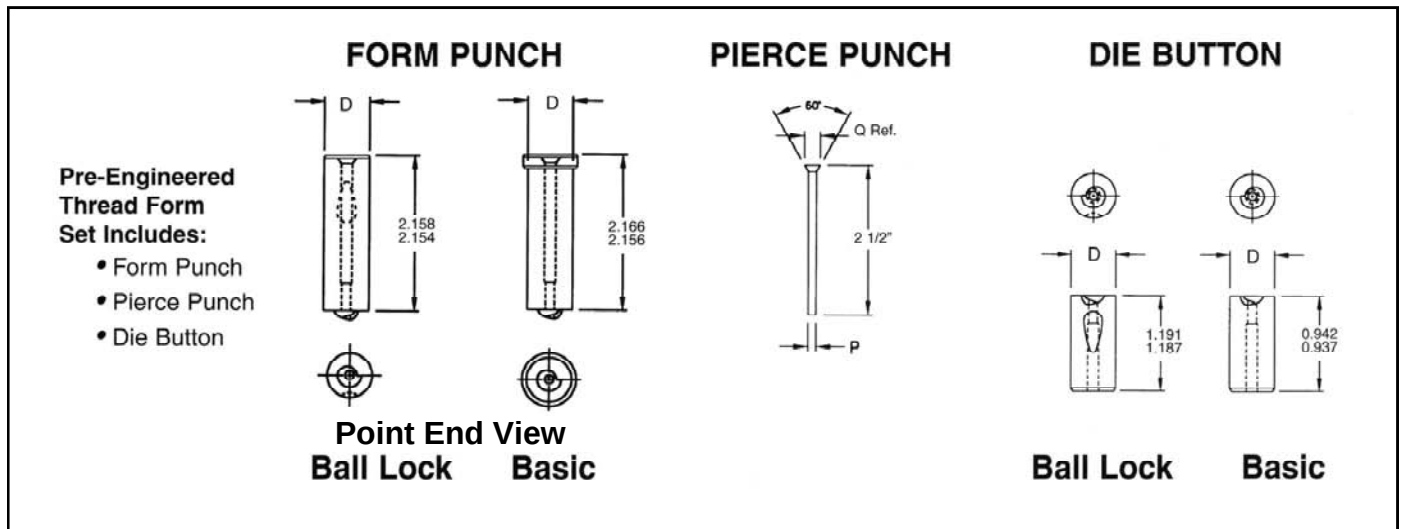
- ◆ FORM A SELF-LOCKING FASTENER WITH YOUR DIE TOOLING
- ◆ IDEAL FOR THINNER MATERIALS
- ◆ UNIQUE DESIGN USES METAL TENSION TO LOCK SCREWS IN PLACE
- ◆ SPEEDS PRODUCTION, CUTS COSTS
- ◆ STANDARD FORMS FOR SCREW TYPE AND THREADS AVAILABLE

THREAD FORMS

BALL LOCK AND BASIC TOOLS

How to Order:

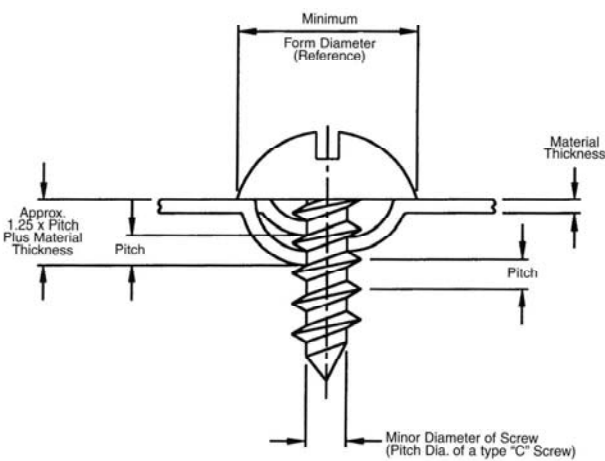
Please specify Catalog Number



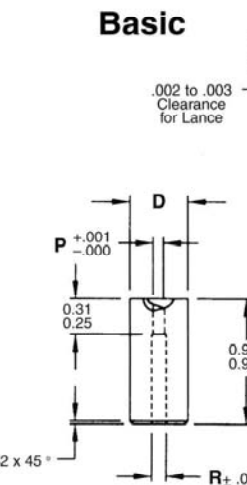
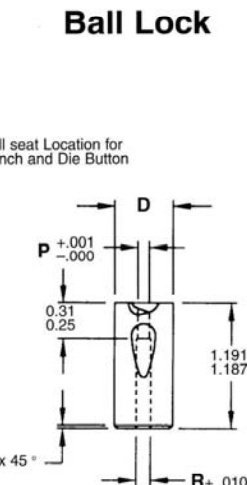
Screw Type	Thread Size	Form Set		Form Punch		Pierce Punch	Die Button		Diameter D
		Ball Lock	Basic	Ball Lock	Basic		Ball Lock	Basic	
		Catalog Number	Catalog Number	Catalog Number	Catalog Number		Catalog Number	Catalog Number	
 A	6-18	6-18-LBTS	6-18-TS	803-LBTP	TP-6A	8031-P	813-LBTD	TD-6A	3/8
	8-15	8-15-LBTS	8-15-TS	804-LBTP	TP-8A	8042-P	814-LBTD	TD-8A	1/2
	10-12	10-12-LBTS	10-12-TS	824-LBTP	TP-10A	8243-P	834-LBTD	TD-10A	1/2
	12-11	12-11-LBTS	12-11-TS	845-LBTP	TP-12A	8454-P	855-LBTD	TD-12A	5/8
	14-10	14-10-LBTS	14-10-TS	865-LBTP	TP-14A	8655-P	875-LBTD	TD-14A	5/8
	20-9	20-9-LBTS	20-9-TS	886-LBTP	TP-20A	8866-P	896-LBTD	TD-20A	3/4
 B AB	6-20	6-20-LBTS	6-20-TS	1803-LBTP	TP-6B	18031-P	1813-LBTD	TD-6B	3/8
	8-18	8-18-LBTS	8-18-TS	1804-LBTP	TP-8B	—	1814-LBTD	TD-8B	1/2
	10-16	10-16-LBTS	10-16-TS	1824-LBTP	TP-10B	18243-P	1834-LBTD	TD-10B	1/2
	12-14	12-14-LBTS	12-14-TS	1845-LBTP	TP-12B	18454-P	1855-LBTD	TD-12B	5/8
	1/4-14	1/4-14-LBTS	1/4-14-TS	1865-LBTP	TP-1/4B	18655-P	1875-LBTD	TD-1/4B	5/8
	5/16-12	5/16-12-LBTS	5/16-12-TS	1886-LBTP	TP-20B	18866-P	1896-LBTD	TD-5/16B	3/4
 C (Machine Screws)	6-32	6-32-LBTS	6-32-TS	2803-LBTP	TP-6C	28031-P	2813-LBTD	TD-6C	3/8
	8-32	8-32-LBTS	8-32-TS	2804-LBTP	TP-8C	28042-P	2814-LBTD	TD-8C	1/2
	10-24	10-24-LBTS	10-24-TS	2824-LBTP	TP-10C	28243-P	2834-LBTD	TD-10C	1/2
	10-32	10-32-LBTS	10-32-TS	2845-LBTP	TP-10CF	28454-P	2855-LBTD	TD-10CF	5/8
	1/4-20	1/4-20-LBTS	1/4-20-TS	2865-LBTP	TP-1/4C	28655-P	2875-LBTD	TD-1/4C	5/8
	5/16-18	5/16-18-LBTS	5/16-18-TS	2886-LBTP	TP-5/16C	28866-P	2896-LBTD	TD-5/16C	3/4

THREAD FORMS

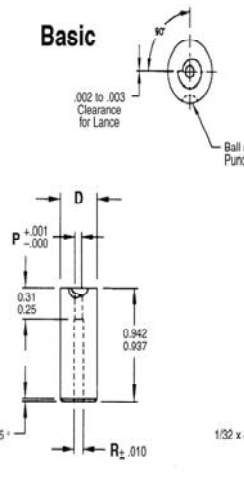
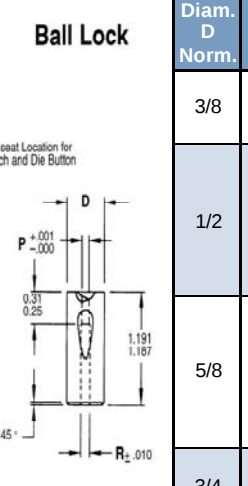
THREAD FORM DATA

					
	Thread Size	Material Thickness	Pitch (Ref.)	Max. Minor Diameter of Screw	Minimum Form Diameter
TYPE "A" SCREWS					
	6 - 18	.020 - .030	0.0556	0.102	0.276
	8 - 15	.025 - .040	0.0667	0.123	0.306
	10 - 12	.030 - .045	0.0833	0.133	0.352
	12 - 11	.035 - .054	0.0909	0.162	0.406
	14 - 10	.038 - .060	0.1000	0.185	0.442
	20 - 9	.050 - .060	0.1111	0.234	0.556
TYPE "B" AND "A B" SCREWS					
	6 - 20	.020 - .030	0.0500	0.104	0.208
	8 - 18	.020 - .030	0.0556	0.122	0.296
	10 - 16	.020 - .030	0.0625	0.141	0.374
	12 - 14	.030 - .040	0.0714	0.164	0.400
	1/4 - 14	.030 - .040	0.0714	0.192	0.400
	5/16 - 12	.030 - .040	0.0833	0.244	0.552
TYPE "C" SCREWS (MACHINE SCREWS)					
	6 - 32	.010 - .020	0.0313	0.118	0.290
	8 - 32	.010 - .020	0.0313	0.144	0.324
	10 - 24	.015 - .025	0.0417	0.163	0.370
	10 - 32	.010 - .020	0.0313	0.170	0.348
	1/4 - 20	.020 - .030	0.0500	0.218	0.478
	5/16 - 18	.020 - .030	0.0556	0.276	0.490

DIE BUTTONS

										
	Basic	Ball Lock	Body Diam. D Norm.	Ball Lock Body Diam. D Actual	Ball Size	Press Fit Body Diam. D Actual	Thread Size	P Diam.	R Diam.	
3/8					1/4	.3758/.3755	6-18	0.108	0.141	
							6-20	0.111	0.141	
							6-32	0.118	0.136	
1/2					5/16	.5008/.5005	8-15	0.125	0.166	
							8-18	0.125	0.166	
							8-32	0.144	0.156	
							10-12	0.134	0.173	
							10-16	0.142	0.173	
5/8					5/16	.6264/.6260	10-24	0.164	0.177	
							10-32	0.171	0.188	
							12-11	0.162	0.196	
							12-14	0.162	0.196	
							14-10	0.187	0.228	
							1/4-14	0.192	0.228	
3/4					3/8	.7514/.7510	1/4-20	0.218	0.234	
							20-9	0.238	0.281	
							5/16-12	0.245	0.281	
							5/16-18	0.277	0.290	

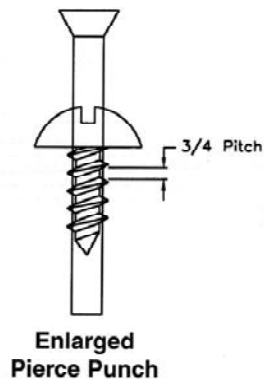
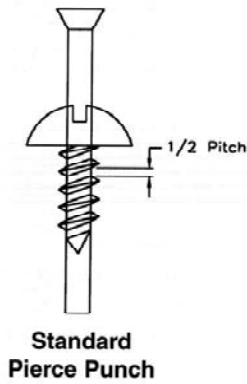
PUNCHES

Basic		Ball Lock		Ball Lock Only			Basic Only			Form Punch				Pierce Punch	
				Shank Diam. D Norm.	Shank Diam. D Actual	Ball Size	Shank Diam. D Actual	Head Diam. H	Thick. T	Thread Size	Hole Diam.	Relief Diam.	Sink Diam. C	Diam. P	Diam. Q
3/8				.3748/.3746	1/4	.3755/.3752	1/2	3/16	6-18	.1045	0.116	0.188	0.104	0.188	
									6-20	.1075	0.120	0.193	0.107	0.193	
									6-32	.1155	0.125	0.208	0.115	0.208	
1/2				.4998/.4996	5/16	.5005/.5002	5/8	3/16	8-15	.1205	0.136	0.217	0.120	0.217	
									8-18	.1205	0.136	0.217	0.120	0.217	
									8-32	.1415	0.156	0.255	0.141	0.255	
									10-12	.1285	0.141	0.231	0.128	0.231	
									10-16	.1385	0.150	0.250	0.138	0.250	
5/8				.6248/.6246	5/16	.6255/.6252	3/4	1/4	10-24	.1605	0.172	0.289	0.160	0.289	
									10-32	.1675	0.187	0.302	0.167	0.302	
									12-11	.1565	0.166	0.282	0.156	0.282	
									12-14	.1585	0.170	0.286	0.158	0.286	
									14-10	.1805	0.191	0.325	0.180	0.325	
									1/4-14	.1885	0.201	0.340	0.188	0.340	
3/4				.7498/.7496	3/8	.7505/.7502	7/8	1/4	1/4-20	.2135	0.234	0.385	0.213	0.385	
									20-9	.2315	0.242	0.418	0.231	0.418	
									5/16-12	.2415	0.250	0.436	0.241	0.436	
									5/16-18	.2725	0.281	0.492	0.272	0.492	

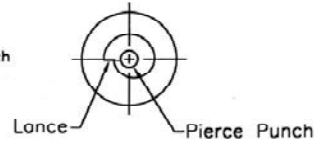
THREAD FORMS

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.

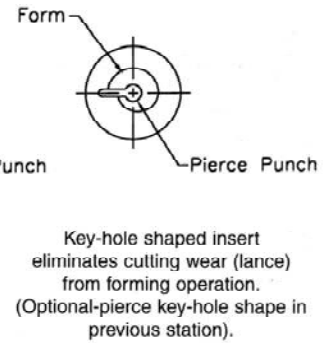


(With Lance)
For 200,000 Pieces or less

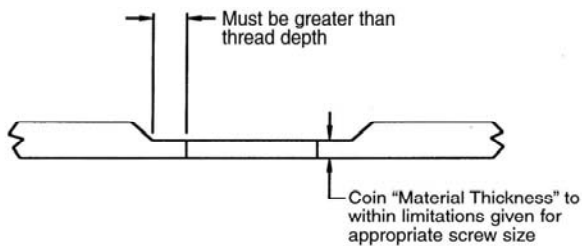


Wear factors will vary with
different types of material

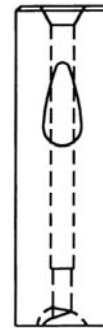
(Without Lance)
Suggested for greater than
200,000 pieces



3. Thin material in a previous station.



For design flexibility, inverted
form is available.



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