Thread Form Punch & Die Button Units

For Type A, B, AB, & C Metal Screws

Dayton Thread Form Punch & Die Button Units offer you a single-step method for punching and forming threads. Dayton Thread Form works by punching the hole, lancing the material, and cutting a helical spiral in the material to form the proper thread helix for the desired type of metal screw. Thread Form creates a complete self-locking fastening system that holds the screws more tightly with metal tension—thereby reducing vibration, cutting assembly costs, and increasing productivity.

Single-step, in-die process provides exceptional holding power.

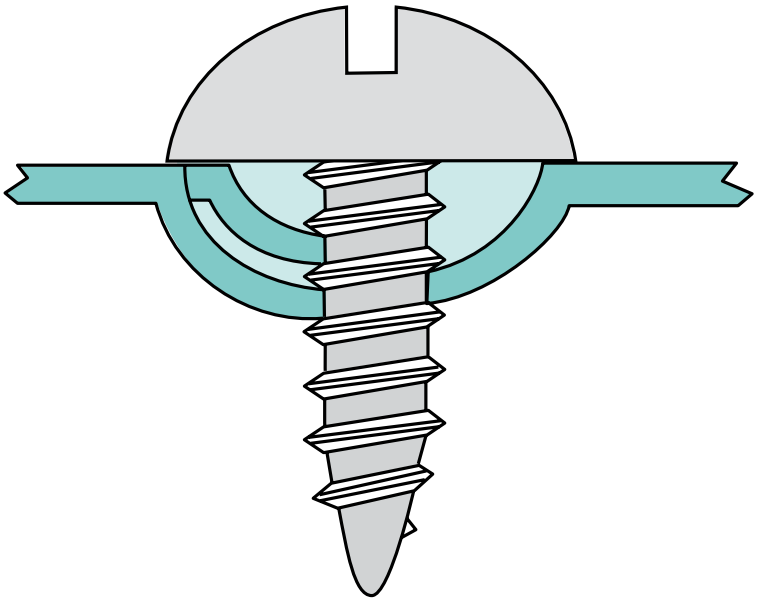
Cost-effective.
Creates superior self-locking system.

Thread Form
Punch & Die Button Units

DAYTON®

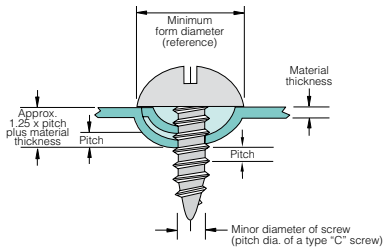
Global leader in providing fabrication and stamping solutions

www.daytonprogress.com



Thread Size	Material Thickness	Pitch (Ref.)	Max. Minor Dia.Of Screw	Minimum Form Dia.
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" AND "A B" 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 (MACHINE 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

The Thread Form Punch and Die Button Unit cuts a helical spiral in the metal that matches the thread (helical groove) of the applicable metal screw, as shown above. Use the descriptions and dimensions shown in the drawing below and in the charts to determine the product numbers.



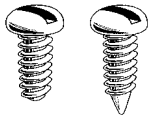
HOW TO ORDER

Specify:	Qty	Type
Example:	12	LFS6-18
	12	KFP10-12
	6	KWX 250 P.104

Metric Conversion

All screw sizes are shown in inch dimensions. Most metric sheet metal screws, however, are standard inch sizes converted into millimeter dimensions. If screws cannot be found in metric sizes, the equivalent inch sizes can be used.

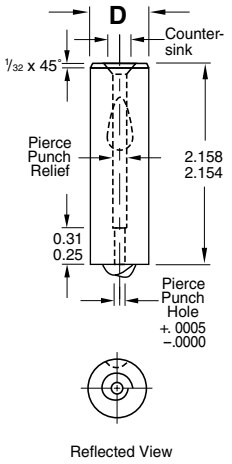
Ordering Information

Screw Type	Screw Size	*Thread Form Set Ball Lock	*Thread Form Set Kommercial	Thread Form Punch Ball Lock	Thread Form Punch Kommercial	Thread Form Die Button Ball Lock	Thread Form Die Button Kommercial	Thread Form Pierce Punch	D Dia.
 A	6 - 18	LFS6-18	KFS6-18	LFP6-18	KFP6-18	LFM6-18	KFM6-18	KWX 250 P.104	3/8
	8 - 15	LFS8-15	KFS8-15	LFP8-15	KFP8-15	LFM8-15	KFM8-15	KWX 250 P.120	1/2
	10 - 12	LFS10-12	KFS10-12	LFP10-12	KFP10-12	LFM10-12	KFM10-12	KWX 250 P.128	1/2
	12 - 11	LFS12-11	KFS12-11	LFP12-11	KFP12-11	LFM12-11	KFM12-11	KWX 250 P.156	5/8
	14 - 10	LFS14-10	KFS14-10	LFP14-10	KFP14-10	LFM14-10	KFM14-10	KWX 250 P.180	5/8
	20 - 9	LFS20-9	KFS20-9	LFP20-9	KFP20-9	LFM20-9	KFM20-9	KWX 250 P.231	3/4
 B AB	6 - 20	LFS6-20	KFS6-20	LFP6-20	KFP6-20	LFM6-20	KFM6-20	KWX 250 P.107	3/8
	8 - 18	LFS8-18	KFS8-18	LFP8-18	KFP8-18	LFM8-18	KFM8-18	KWX 250 P.120	1/2
	10 - 16	LFS10-16	KFS10-16	LFP10-16	KFP10-16	LFM10-16	KFM10-16	KWX 250 P.138	1/2
	12 - 14	LFS12-14	KFS12-14	LFP12-14	KFP12-14	LFM12-14	KFM12-14	KWX 250 P.158	5/8
	1/4 - 14	LFS1/4-14	KFS1/4-14	LFP1/4-14	KFP1/4-14	LFM1/4-14	KFM1/4-14	KWX 250 P.188	5/8
	5/16 - 12	LFS5/16-12	KFS5/16-12	LFP5/16-12	KFP5/16-12	LFM5/16-12	KFM5/16-12	KWX 250 P.241	3/4
 C	6 - 32	LFS6-32	KFS6-32	LFP6-32	KFP6-32	LFM6-32	KFM6-32	KWX 250 P.115	3/8
	8 - 32	LFS8-32	KFS8-32	LFP8-32	KFP8-32	LFM8-32	KFM8-32	KWX 250 P.141	1/2
	10 - 24	LFS10-24	KFS10-24	LFP10-24	KFP10-24	LFM10-24	KFM10-24	KWX 250 P.160	1/2
	10 - 32	LFS10-32	KFS10-32	LFP10-32	KFP10-32	LFM10-32	KFM10-32	KWX 250 P.167	5/8
	1/4 - 20	LFS1/4-20	KFS1/4-20	LFP1/4-20	KFP1/4-20	LFM1/4-20	KFM1/4-20	KWX 250 P.213	5/8
	5/16 - 18	LFS5/16-18	KFS5/16-18	LFP5/16-18	KFP5/16-18	LFM5/16-18	KFM5/16-18	KWX 250 P.272	3/4

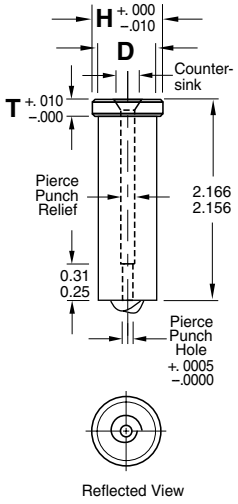
*The complete Thread Form Set consists of 1 Form Punch, 1 Pierce Punch, and 1 Die Button. Products can be ordered in sets or as individual parts.

Form Punches

LFP Light Duty Ball Lock



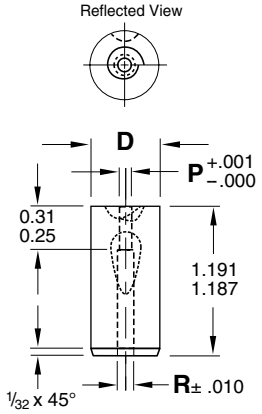
KFP Kommercial



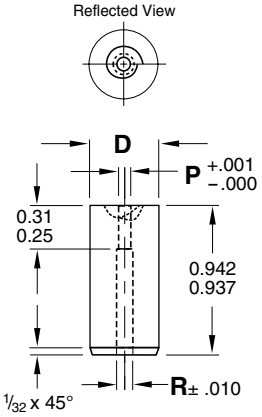
Ball Lock Shank Dia. D	Press Fit Shank Dia. D	Press Fit Head Dia. H	Press Fit Thickess T	Thread Size	Form Punch Hole Dia.	Form Punch Relief Dia.	Form Punch C Sink Dia.
.3748/.3746	.3755/.3752	1/2	3/16	6-18	.1045	.116	.188
				6-20	.1075	.120	.193
				6-32	.1155	.125	.208
.4998/.4996	.5005/.5002	5/8	3/16	8-15	.1205	.136	.217
				8-18	.1205	.136	.217
				8-32	.1415	.156	.255
				10-12	.1285	.141	.231
				10-16	.1385	.150	.250
				10-24	.1605	.172	.289
.6248/.6246	.6255/.6252	3/4	1/4	10-32	.1675	.187	.302
				12-11	.1565	.166	.282
				12-14	.1585	.170	.286
				14-10	.1805	.191	.325
				1/4-14	.1885	.201	.340
				1/4-20	.2135	.234	.385
.7498/.7496	.7505/.7502	7/8	1/4	20-9	.2315	.242	.418
				5/16-12	.2415	.250	.436
				5/16-18	.2725	.281	.492

Die Buttons

LFM Light Duty Ball Lock



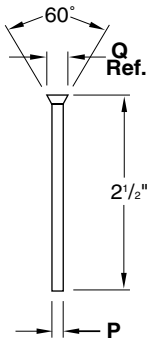
KFM Kommercial



Ball Lock Dia. D	Kommercial Dia. D	Thread Size	P Dia.	R Dia.
.3748/.3746	.3758/.3755	6 - 18	.108	.141
		6 - 20	.111	.141
		6 - 32	.118	.136
.4998/.4996	.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
.6248/.6246	.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
.7498/.7496	.7514/.7510	20 - 9	.238	.281
		5/16 - 12	.245	.281
		5/16 - 18	.277	.290

Pierce Punches

KWX

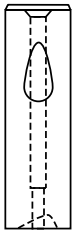


Thread Size	Pierce Punch P Dia.	Pierce Punch Q Dia.
6 - 18	.104	.188
6 - 20	.107	.193
6 - 32	.115	.208
8 - 15	.120	.217
8 - 18	.120	.217
8 - 32	.141	.255
10 - 12	.128	.231
10 - 16	.138	.250
10 - 24	.160	.289
10 - 32	.167	.302
12 - 11	.156	.282
12 - 14	.158	.286
14 - 10	.180	.325
1/4 - 14	.188	.340
1/4 - 20	.213	.385
20 - 9	.231	.418
5/16 - 12	.241	.436
5/16 - 18	.272	.492

FDS®
FIRM DELIVERY SCHEDULE

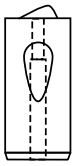
1-5 Days

Options



Inverted Form

For design flexibility, an inverted form is available. Simply specify "Inverted Form" on your order.

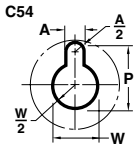


Material Thickness

If thicker material is used, the area can be coined in a previous station in the die to thin the material. Coining hardens the material, and affects tool life.

Applications of 200,000+

For larger runs, it is recommended that a keyhole shape be punched in a previous station. The keyhole shaped insert eliminates the wear created from the lance during the forming operation.

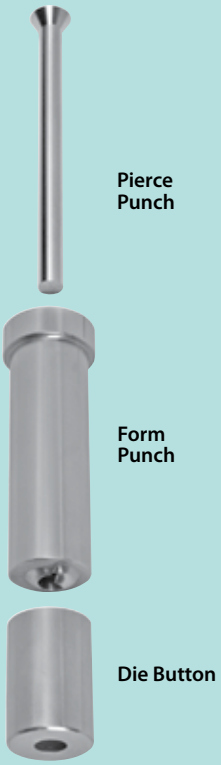


A Dayton Progress C54 standard punch and die button shape is used. The table below shows the keyhole dimensions and the die button clearance for each of the thread sizes. For additional information on dimensions and tolerances, refer to the Dayton Progress Ball Lock and Kommercial catalogs—both available on line.

Screw Size	P	W	A	*Die Button Clearance
6 - 18	.190	.104	.030	0.003
8 - 15	.213	.120	.032	0.004
10 - 12	.240	.128	.035	0.005
12 - 11	.281	.156	.036	0.005
14 - 10	.311	.180	.038	0.006
20 - 9	.396	.231	.040	0.006
6 - 20	.175	.107	.030	0.003
8 - 18	.208	.120	.030	0.003
10 - 16	.256	.138	.031	0.003
12 - 14	.279	.158	.033	0.003
1/4 - 14	.315	.188	.033	0.003
5/16 - 12	.397	.241	.035	0.003
6 - 32	.203	.115	.028	0.003
8 - 32	.233	.141	.028	0.003
10 - 24	.265	.160	.030	0.003
10 - 32	.258	.167	.028	0.003
1/4 - 20	.346	.213	.030	0.004
5/16 - 18	.413	.272	.030	0.004

* Clearances shown are based on 5% per side of the recommended stock thickness for the screw size listed. For other thickness, see the chart at the top of p. 2.

Thread Form Punch & Die Button Units



Dayton Thread Form Punch & Die Button Units (available in sets or as individual parts) offer you a single-step, in-die method for punching and forming threads. Dayton Thread Form Units offer many features and benefits over regular hole-tapping systems:

- Fast and easy method for creating a self-locking fastener
- Utilizes metal tension to lock screws in place
- Provides excellent holding power against vibration
- Eliminates the risk of cross-threading
- Finished part utilizes single screw in assembly—eliminates the need for bolts
- Cuts assembly costs, increases productivity
- Wide range of applications

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