

FIG. 1

PRINTED CIRCUIT BOARD - STANDARD 5 HOLE

FIG	LAYOUT CODE	DIM 'A' ±.002 [±.05]	DIM 'B' ±.002 [±.05]	DIM 'C' ±.002 [±.05]	DIM 'D' ±.002 [±.05]
1	PC030	.100 [2.54]	.050 [1.27]	.035 [0.89]	.035 [0.89]
1	PC040	.200 [5.08]	.100 [2.54]	.046 [1.17]	.046 [1.17]
1	PC050	.200 [5.08]	.100 [2.54]	.062 [1.57]	.046 [1.17]
1	PC060	.200 [5.08]	.100 [2.54]	.062 [1.57]	.055 [1.40]
1	PC070	.250 [6.35]	.125 [3.18]	.062 [1.57]	.046 [1.17]
1	PC072	.250 [6.35]	.125 [3.18]	.062 [1.57]	.055 [1.40]
1	PC080	.250 [6.35]	.125 [3.18]	.096 [2.44]	.046 [1.17]
1	PC090	.260 [6.60]	.130 [3.30]	.062 [1.57]	.046 [1.17]
1	PC100	.391 [9.93]	.196 [4.98]	.072 [1.83]	.080 [2.03]
1	PC110	.500 [12.70]	.250 [6.35]	.062 [1.57]	.046 [1.17]

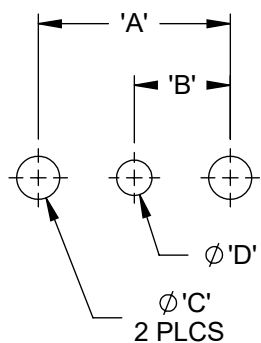


FIG. 2

PRINTED CIRCUIT BOARD - INLINE 3 HOLE

FIG	LAYOUT CODE	DIM 'A' ±.002 [±.05]	DIM 'B' ±.002 [±.05]	DIM 'C' ±.002 [±.05]	DIM 'D' ±.002 [±.05]
2	PC250	.402 [10.20]	.201 [5.10]	.055 [1.40]	.055 [1.40]

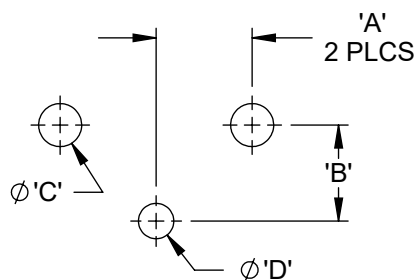
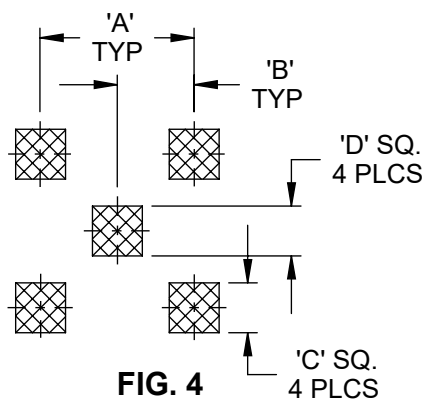


FIG. 3

PRINTED CIRCUIT BOARD - OFFSET 3 HOLE

FIG	LAYOUT CODE	DIM 'A' ±.002 [±.05]	DIM 'B' ±.002 [±.05]	DIM 'C' ±.002 [±.05]	DIM 'D' ±.002 [±.05]
3	PC300	.200 [5.08]	.193 [4.90]	.055 [1.40]	.055 [1.40]

*ALL DIMENSIONS ARE IN INCHES AND [MILLIMETERS]



PRINTED CIRCUIT BOARD SURFACE - STANDARD 5 PAD

FIG	LAYOUT CODE	DIM 'A' ±.002 [±.05]	DIM 'B' ±.002 [±.05]	DIM 'C' ±.002 [±.05]	DIM 'D' ±.002 [±.05]
4	SF030	.177 [4.50]	.089 [2.26]	.070 [1.78]	.046 [1.17]
4	SF040	.190 [4.83]	.095 [2.41]	.070 [1.78]	.046 [1.17]
4	SF050	.190 [4.83]	.095 [2.41]	.070 [1.78]	.062 [1.57]
4	SF060	.320 [8.15]	.160 [4.08]	.160 [4.08]	.062 [1.57]
4	SF070	.400 [10.16]	.200 [5.08]	.156 [3.96]	.125 [3.18]
4	SF080	.500 [12.70]	.250 [6.35]	.170 [4.32]	.150 [3.81]

PRINTED CIRCUIT BOARD SURFACE - 3 PAD

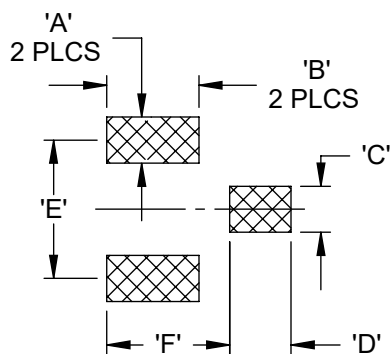


FIG	LAYOUT CODE	DIM 'A' ±.002 [±.05]	DIM 'B' ±.002 [±.05]	DIM 'C' ±.002 [±.05]	DIM 'D' ±.002 [±.05]	DIM 'E' ±.002 [±.05]	DIM 'F' ±.002 [±.05]
5	SF200	.041 [1.05]	.087 [2.20]	.039 [1.00]	.039 [1.00]	.116 [2.95]	.083 [2.10]

*ALL DIMENSIONS ARE IN INCHES AND [MILLIMETERS]

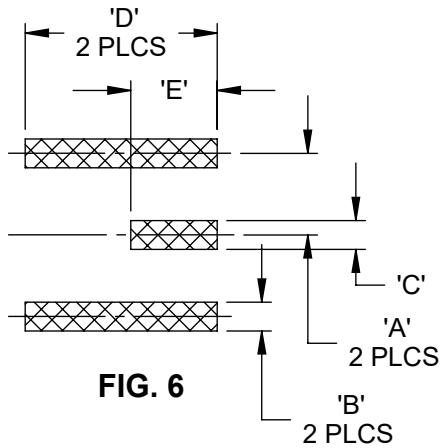


FIG. 6

PRINTED CIRCUIT BOARD END LAUNCH - PAD

FIG	LAYOUT CODE	DIM 'A' ±.002 [±.05]	DIM 'B' ±.002 [±.05]	DIM 'C' ±.002 [±.05]	DIM 'D' ±.002 [±.05]	DIM 'E' ±.002 [±.05]
6	EG030	.085 [2.16]	.030 [0.76]	.030 [0.76]	.300 [7.62]	.120 [3.05]
6	EG040	.108 [2.75]	.059 [1.50]	.020 [0.50]	.138 [3.50]	.075 [1.90]
6	EG045	.128 [3.25]	.050 [1.27]	.020 [0.50]	.138 [3.50]	.075 [1.90]
6	EG060	.168 [4.27]	.050 [1.27]	.050 [1.27]	.195 [4.95]	.195 [4.95]

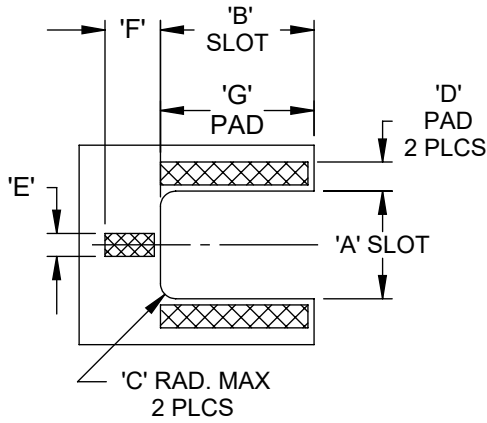


FIG. 7

PRINTED CIRCUIT BOARD END LAUNCH - PAD WITH CUTOUT

FIG	LAYOUT CODE	DIM 'A' ±.002 [±.05]	DIM 'B' ±.002 [±.05]	DIM 'C' MAX.	DIM 'D' ±.002 [±.05]	DIM 'E' ±.002 [±.05]	DIM 'F' ±.002 [±.05]	DIM 'G' ±.002 [±.05]
7	EG130	.130 [3.3]	.177 [4.5]	.020 [0.5]	.087 [2.2]	.039 [1.0]	.118 [3.0]	.177 [4.5]
7	EG150	.295 [7.5]	.295 [7.5]	.010 [0.25]	.051 [1.3]	.059 [1.5]	.100 [2.5]	.275 [7.0]
7	EG190	.531 [13.5]	.571 [14.5]	.047 [1.2]	.062 [1.6]	.039 [1.0]	.118 [3.0]	.571 [14.5]

*ALL DIMENSIONS ARE IN INCHES AND [MILLIMETERS]

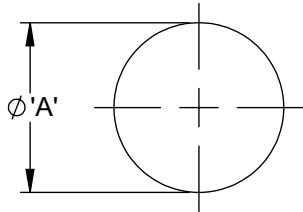


FIG. 8

BULKHEAD - SINGLE HOLE

FIG	LAYOUT CODE	DIM 'A'		FIG	LAYOUT CODE	DIM 'A'	
8	BK030	.182 ⁺ .001/- .000	[4.62 ⁺ .03/- .00]	8	BK160	.405 [±] .002	[10.29 [±] .05]
8	BK040	.185 [±] .001	[4.70 [±] .03]	8	BK170	.442 [±] .002	[11.23 [±] .05]
8	BK050	.195 [±] .002	[4.95 [±] .05]	8	BK180	.450 [±] .001	[11.43 [±] .03]
8	BK060	.242 ⁺ .001/- .000	[6.15 ⁺ .03/- .00]	8	BK190	.505 [±] .002	[12.83 [±] .05]
8	BK070	.255 [±] .002	[6.50 [±] .05]	8	BK200	.630 [±] .002	[16.00 [±] .05]
8	BK080	.267 [±] .001	[6.78 [±] .03]	8	BK207	.720 [±] .005	[18.25 [±] .13]
8	BK090	.286 [±] .002	[7.26 [±] .05]	8	BK210	.755 [±] .002	[19.18 [±] .05]
8	BK100	.317 [±] .002	[8.05 [±] .05]	8	BK220	.817 [±] .002	[20.75 [±] .05]
8	BK110	.325 [±] .002	[8.26 [±] .05]	8			
8	BK120	.359 [±] .002	[9.10 [±] .05]	8			
8	BK130	.368 ⁺ .002/- .001	[9.35 ⁺ .05/- .03]	8			
8	BK140	.380 [±] .002	[9.65 [±] .05]	8			
8	BK150	.398 [±] .002	[10.10 [±] .05]	8			

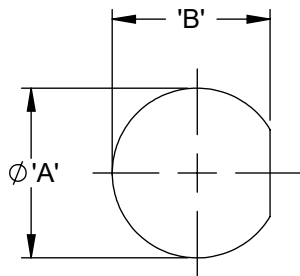


FIG. 9

BULKHEAD - 'D' FLAT/SINGLE HOLE

FIG	LAYOUT CODE	DIM 'A'	DIM 'B'	FIG	LAYOUT CODE	DIM 'A'	DIM 'B'
		$\pm .002$ [$\pm .05$]	$\pm .002$ [$\pm .05$]	9			
9	BK280	.142 [3.60]	.129 [3.30]	9			
9	BK290	.195 [4.95]	.180 [4.60]	9			
9	BK300	.255 [6.50]	.240 [6.10]	9			
9	BK310	.281 [7.15]	.265 [6.75]	9			
9	BK320	.317 [8.05]	.285 [7.25]	9			
9	BK330	.380 [9.65]	.348 [8.85]	9			
9	BK340	.442 [11.25]	.411 [10.45]	9			
9	BK350	.505 [12.85]	.473 [12.00]	9			
9	BK355	.567 [14.40]	.531 [13.50]	9			
9	BK360	.630 [16.00]	.595 [15.10]	9			
9	BK370	.755 [19.20]	.721 [18.30]	9			
9	BK380	.817 [20.75]	.784 [19.90]	9			
9	BK390	.885 [22.50]	.822 [20.90]	9			

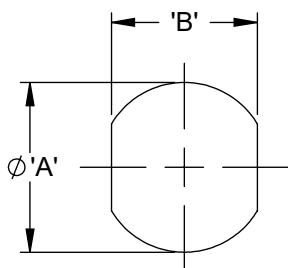


FIG. 10

BULKHEAD - DOUBLE 'D' FLAT/SINGLE HOLE

FIG	LAYOUT CODE	DIM 'A'	DIM 'B'	FIG	LAYOUT CODE	DIM 'A'	DIM 'B'
		$\pm .002$ [$\pm .05$]	$\pm .002$ [$\pm .05$]	10			
10	BK440	.279 [7.10]	.250 [6.35]	10			
10	BK450	.317 [8.05]	.283 [7.19]	10			
10	BK460	.358 [9.10]	.319 [8.10]	10			
10	BK470	.380 [9.65]	.317 [8.05]	10			
10	BK480	.398 [10.10]	.358 [9.10]	10			
10	BK490	.505 [12.83]	.429 [10.90]	10			
10	BK500	.505 [12.83]	.441 [11.20]	10			
10	BK510	.630 [16.00]	.537 [13.64]	10			
10	BK520	.817 [20.75]	.755 [19.18]	10			
10	BK530	.380 [9.65]	.375 [9.52]	10			
10				10			

*ALL DIMENSIONS ARE IN INCHES AND [MILLIMETERS]

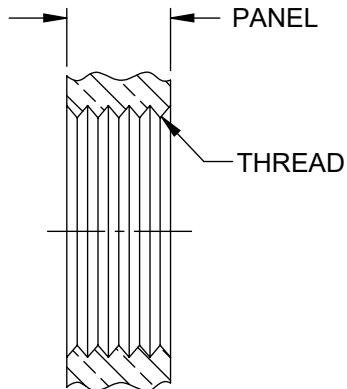


FIG. 11

BULKHEAD - THREADED SINGLE HOLE

FIG.	LAYOUT CODE	IMPERIAL THREAD	FIG.	LAYOUT CODE	METRIC THREAD
11	BK560	#10-32 UNF-2B	11	BK670	M2.5 X 0.45-6H
11	BK565	#12-32 UNEF-2B	11	BK675	M3 X 0.5-6H
11	BK570	1/4-20 UNC-2B	11	BK680	M5 X 0.5-6H
11	BK575	1/4-36 UNS-2B	11	BK685	M6 X 1.0-6H
11	BK580	9/32-40 UNS-2B	11	BK690	M7 X 0.5-6H
11	BK585	5/16-32 UNEF-2B	11	BK695	M9 X 0.5-6H
11	BK590	11/32-32 UNS-2B	11	BK700	M10 X 1.25-6H
11	BK595	3/8-32 UNEF-2B	11	BK705	M11 X 0.75-6H
11	BK600	7/16-28 UNEF-2B	11	BK710	M12 X 1.0-6H
11	BK605	15/32-32 UNS-2B	11	BK712	M12 X 1.5-6H
11	BK610	1/2-28 UNEF-2B	11	BK715	M14 X 1.0-6H
11	BK615	9/16-24 UNEF-2B	11	BK720	M15 X 1.0-6H
11	BK620	5/8-24 UNEF-2B	11	BK725	M16 X 1.0-6H
11	BK625	11/16-24 UNEF-2B	11	BK730	M18 X 1.0-6H
11	BK630	3/4-20 UNEF-2B	11	BK735	M20 X 1.0-6H
11	BK635	13/16-20 UNEF-2B	11	BK740	M20 X 1.5-6H
11			11		

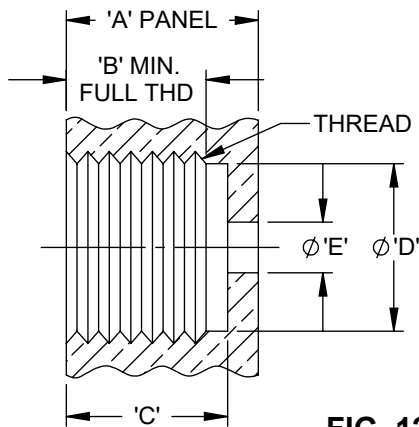


FIG. 12

BULKHEAD - THREADED FEEDTHRU

FIG	LAYOUT CODE	THREAD	DIM 'A' PANEL	DIM 'B' MIN. THD.	DIM 'C' ±.002 [±.05]	DIM 'D' ±.001 [±.03]	DIM 'E' ±.001 [±.03]
12	BK790	.190-36 UNS-2B	.250 [6.4]	.180 [4.6]	.210 [5.3]	.162 [4.1]	.051 [1.3]
12	BK795	1/4-36 UNS-2B	.118 [3.0]	.078 [2.0]	.098 [2.5]	.256 [6.5]	.090 [2.3]
12	BK800	1/4-36 UNS-2B	.250 [6.4]	.180 [4.6]	.210 [5.3]	.218 [5.5]	.066 [1.7]

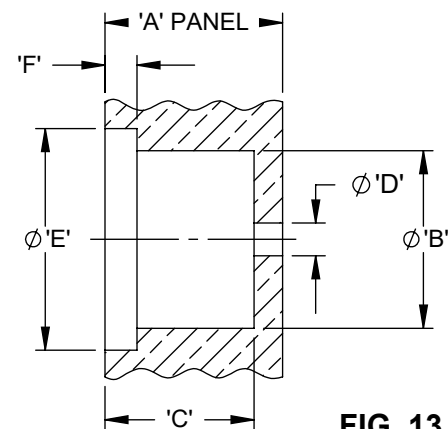


FIG. 13

BULKHEAD - PRESS FIT FEEDTHRU

FIG	LAYOUT CODE	DIM 'A' PANEL	DIM 'B' ±.001 [±.03]	DIM 'C' ±.002 [±.05]	DIM 'D' ±.001 [±.03]	DIM 'E' ±.004 [±.10]	DIM 'F' ±.004 [±.10]
13	BK820	.250	.156 [4.0]	.210 [5.3]	.034 [0.9]	-	-
13	BK825	.250	.250 [6.4]	.210 [5.3]	.046 [1.2]	-	-
13	BK830	.250	.250 [6.4]	.210 [5.3]	.046 [1.2]	.312 [7.92]	.045 [1.15]

*ALL DIMENSIONS ARE IN INCHES AND [MILLIMETERS]

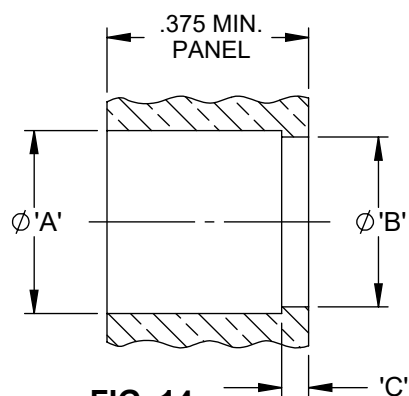


FIG. 14

BULKHEAD - FLOATING SINGLE HOLE

FIG	LAYOUT CODE	DIM 'A' +.003/-0.000 [+0.08/- .00]	DIM 'B' +.002/-0.000 [+0.05/- .00]	DIM 'C' +.000/-0.005 [+0.00/- .13]
14	BK870	.280 [7.1]	.256 [6.5]	.050 [1.3]
14	BK880	.340 [8.6]	.316 [8.0]	.050 [1.3]

*ALL DIMENSIONS ARE IN INCHES AND [MILLIMETERS]

FLANGE - STANDARD 4 HOLE

FIG. 15

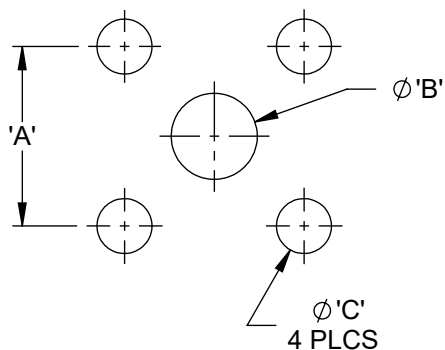
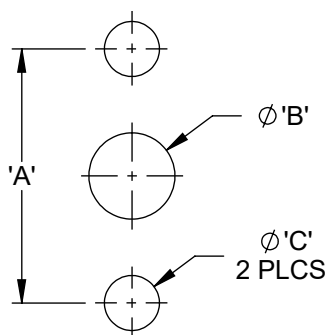


FIG.	LAYOUT CODE	DIM 'A'	DIM 'B'	DIM 'C'
		±.002 [±.05]	±.002 [±.05]	±.002 [±.05]
15	FL018	.250 [6.35]	.090 [2.30]	.067 [1.70]
15	FL020	.250 [6.35]	.165 [4.20]	.067 [1.70]
15	FL022	.250 [6.35]	.258 [6.55]	.067 [1.70]
15	FL040	.340 [8.65]	.090 [2.30]	.104 [2.65]
15	FL042	.340 [8.65]	.125 [3.15]	.104 [2.65]
15	FL050	.340 [8.65]	.165 [4.20]	.104 [2.65]
15	FL060	.340 [8.65]	.165 [4.20]	.116 [2.95]
15	FL070	.340 [8.65]	.258 [6.55]	.104 [2.65]
15	FL080	.340 [8.65]	.258 [6.55]	.116 [2.95]
15	FL086	.500 [12.70]	.080 [2.00]	.104 [2.65]
15	FL088	.500 [12.70]	.090 [2.30]	.125 [3.20]
15	FL090	.500 [12.70]	.165 [4.20]	.125 [3.20]
15	FL100	.500 [12.70]	.230 [5.85]	.104 [2.65]
15	FL110	.500 [12.70]	.286 [7.25]	.125 [3.20]
15	FL120	.500 [12.70]	.340 [8.60]	.110 [2.80]
15	FL122	.500 [12.70]	.340 [8.60]	.125 [3.20]
15	FL130	.500 [12.70]	.366 [9.30]	.125 [3.20]
15	FL140	.500 [12.70]	.394 [10.00]	.125 [3.20]
15	FL150	.500 [12.70]	.442 [11.23]	.104 [2.65]
15	FL160	.500 [12.70]	.442 [11.23]	.125 [3.20]
15	FL162	.500 [12.70]	.500 [12.70]	.125 [3.20]
15	FL167	.531 [13.50]	.215 [5.45]	.125 [3.20]
15	FL170	.531 [13.50]	.340 [8.60]	.125 [3.20]
15	FL172	.531 [13.50]	.442 [11.23]	.125 [3.20]
15	FL180	.718 [18.25]	.165 [4.20]	.125 [3.20]
15	FL185	.718 [18.25]	.215 [5.45]	.125 [3.20]
15	FL190	.718 [18.25]	.286 [7.25]	.125 [3.20]
15	FL200	.718 [18.25]	.394 [10.00]	.125 [3.20]
15	FL210	.718 [18.25]	.488 [12.40]	.125 [3.20]
15	FL212	.718 [18.25]	.488 [12.40]	.144 [3.65]
15	FL220	.718 [18.25]	.638 [16.20]	.125 [3.20]
15	FL230	.718 [18.25]	.638 [16.20]	.156 [3.96]
15	FL232	.750 [19.05]	.230 [5.84]	.172 [4.35]
15	FL238	.937 [23.80]	.286 [7.25]	.172 [4.35]
15	FL240	.975 [24.75]	.634 [16.10]	.144 [3.65]
15	FL250	.975 [24.75]	1.148 [29.15]	.125 [3.20]
15	FL260	.975 [24.75]	1.148 [29.15]	.144 [3.65]

FIG. 16



FLANGE - STANDARD 2 HOLE

FIG.	LAYOUT CODE	DIM 'A'	DIM 'B'	DIM 'C'
		±.002 [±.05]	±.002 [±.05]	±.002 [±.05]
16	FL400	.328 [8.33]	.028 [0.70]	.098 [2.50]
16	FL410	.328 [8.33]	.126 [3.20]	.067 [1.70]
16	FL415	.420 [10.67]	.175 [4.45]	.104 [2.65]
16	FL420	.481 [12.20]	.090 [2.30]	.104 [2.65]
16	FL430	.481 [12.20]	.165 [4.20]	.104 [2.65]
16	FL440	.481 [12.20]	.258 [6.55]	.104 [2.65]
16				

*ALL DIMENSIONS ARE IN INCHES AND [MILLIMETERS]

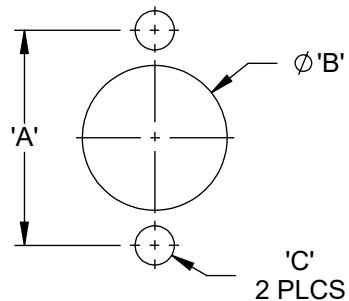


FIG. 17

FLANGE - FLOATING 2 HOLE

FIG	LAYOUT CODE	DIM 'A' ±.004 [±.10]	DIM 'B' +.003/-0.000 [+0.08/-0.00]	DIM 'C' +.004/-0.001 [+0.10/-0.03]
17	FL550	.435 [11.00]	.281 [7.10]	.093 [2.35]
17	FL560	.435 [11.00]	.281 [7.10]	1-72 UNF-2B
17	FL570	.560 [14.20]	.376 [9.55]	.102 [2.60]
17	FL580	.560 [14.20]	.376 [9.55]	2-56 UNC-2B

*ALL DIMENSIONS ARE IN INCHES AND [MILLIMETERS]