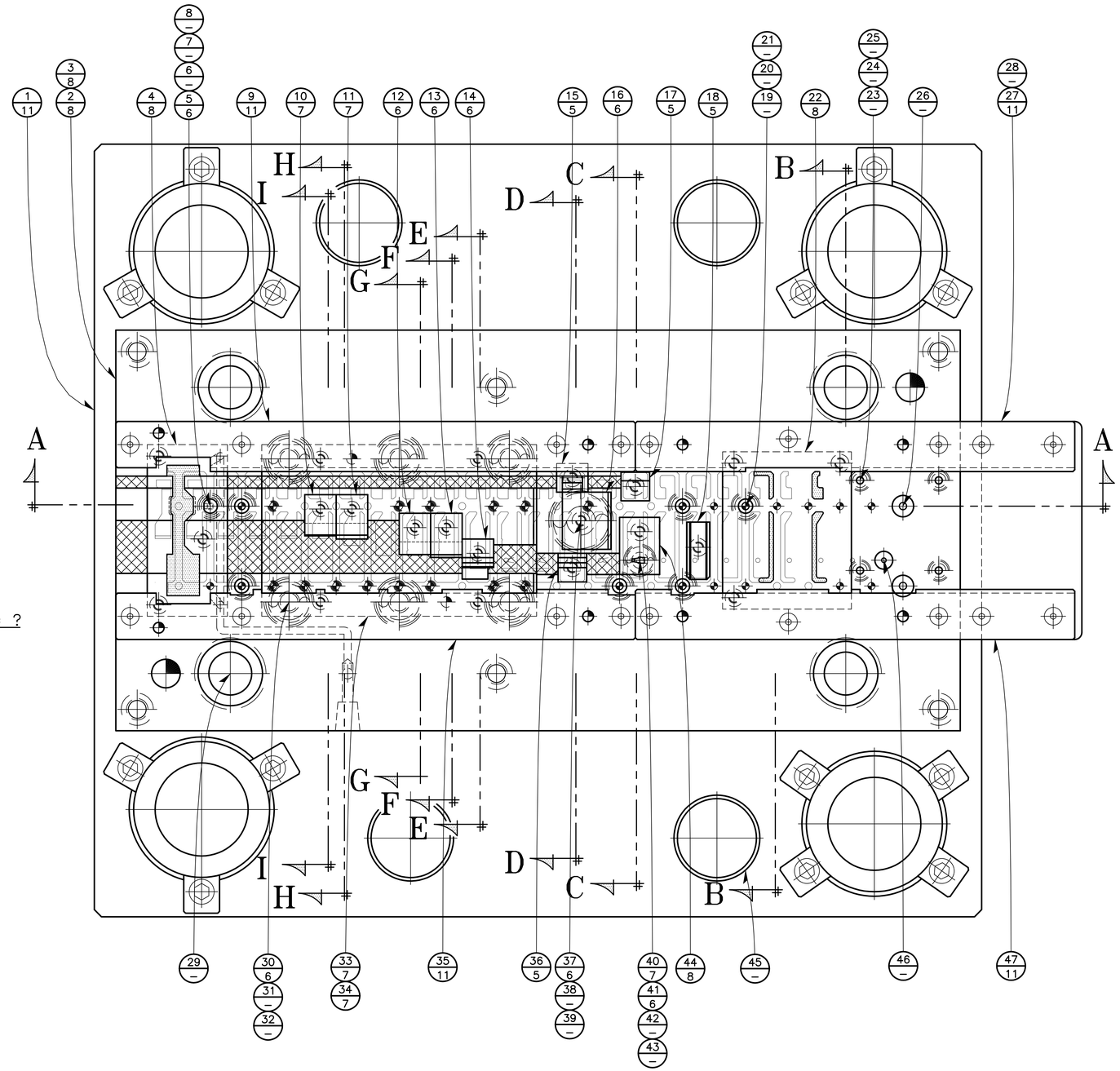

Die Set Data
1. Danly, AS–37BB
2. A = 15 1/2" B = 13 1/2"
3. J = 2" K = 2"
4. O = 1 1/4"ø Demountable
5. Bushing = Demountable
6. Min. Shut Hgt. = ? Stroke = ?
7. Bearing Cage = Type II

	DET.	REQ'D	MAT'L	FINISHED SIZE	Rc
	47	1	A–2	.220 x .875 x 7.675	58–60
"Perfekt"	46	1	Pur.	N–RDS 31–100 M2 x P.081	–
	45	4	CRS	1.50"ø x 3.690" Lg.	–
	44	1	M–4	.700 x 1.000 x 1.000	62–64
	43	1	Pur.	9/16–18 Unified Scr. Plug	–
"Danly"	42	1	Pur.	1/2"øSprg. Cat.#9–0806–36	1.5 Lg
	41	1	A–2	.375"ø x .6325" Lg.	58–60
	40	1	M–4	.100 x .270 x 1.000	62–64
	39	1	Pur.	1 1/8–12 Unified Scr. Plug	–
"Danly"	38	1	Pur.	1"øSprg. Cat.#9–1606–36	1.5 Lg
	37	1	A–2	.750"ø x .680" Lg.	58–60
	36	1	M–4	.500 x .500 x 1.000	62–64
	35	1	A–2	.220 x .875 x 9.075	58–60
	34	1	A–2	.250 x 3.000 x 4.800	58–60
	33	1	A–2	.750 x 3.000 x 4.800	58–60
	32	6	Pur.	7/8–14 Unified Scr. Plug	–
"Danly"	31	6	Pur.	3/4"øSprg. Cat.#9–1206–36	1.5 Lg
	30	6	A–2	.625"ø x .680" Lg.	58–60
"Lamina"	29	4	Pur.	Ground Bush., Cat. #HG–75	–
	28	1	CRS	3/16 x 2.12 x 3.81	–
	27	1	A–2	.220 x .875 x 7.675	58–60
"Perfekt"	26	2	Pur.	N–RDS 37–100 M2 x P.128	–
"Matis"	25	4	Pur.	3/8–24 Unified Scr. Plug	–
	24	4	Pur.	1/4"ø Spring, Len. To Suit.	–
"Matis"	23	4	Pur.	1/8"ø Core Pin, Cat.#SCX–8	–
	22	1	M–4	1.000 x 2.250 x 2.750	62–64
	21	6	Pur.	1/2–20 Unified Scr. Plug	–
"Danly"	20	6	Pur.	3/8"øSprg. Cat.#9–0608–36	2.0 Lg
"Perfekt"	19	6	Pur.	N–RDH 25–131 A2 x P.126	–
	18	1	M–4	.400 x 1.000 x 1.014	62–64
	17	1	M–4	.500 x .500 x 1.000	62–64
	16	1	A–2	.850 x 1.000 x 1.000	58–60
	15	1	M–4	.500 x .550 x 1.0936	62–64
	14	1	M–4	.500 x .550 x .750	62–64
	13	1	M–4	.550 x .750 x .7665	62–64
	12	1	M–4	.550 x .7215 x .750	62–64
	11	1	M–4	.550 x .750 x .7757	62–64
	10	1	M–4	.550 x .7195 x .750	62–64
	9	1	A–2	.220 x .875 x 9.075	58–60
	8	1	Pur.	7/16–20 Unified Scr. Plug	–
	7	1	Pur.	3/8"ø Solid Washer	–
"Danly"	6	1	Pur.	3/8"øSprg. Cat.#9–0607–36	1.75 Lg
	5	1	Pur.	N–REPB A2 25–131	–
	4	1	M–4	1.000 x 1.400 x 3.000	62–64
	3	1	A–2	.375 x 7.000 x 14.750	58–60
	2	1	A–6	1.000 x 7.000 x 14.750	58–60
	1	1	Pur.	Die Set (See Data)	–

Notes:
1. Material = .016" Thk. x 2.180" Wide
   301 Stainless Steel, 1/2 Hard.
2. Multiple = .550"
3. Punch & Die = .0015 Per Side.
   Perf & Die = .0010 Per Side.
4. Punch & Stripper Face = .0005 Per Side.
5. Punch & Backup Plate = .025" Per Side.
6. Land = 3/32" Straight, 1/2° Taper Per Side.

Advanced Designs, Inc.
Powers Lake, Wis.

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CAD FILE:	FORMDIE–1	DATE	SHT. NO. 1 of 13
DRAWN BY:	M. Dennis	05–17–08	
CHECKED:	M. Dennis	05–17–08	SCALE 1 = 1
APPROVED:	–	04–01–06	
PART NO.	87654321		TOOL NO. 03–500
PART NAME	Bracket		

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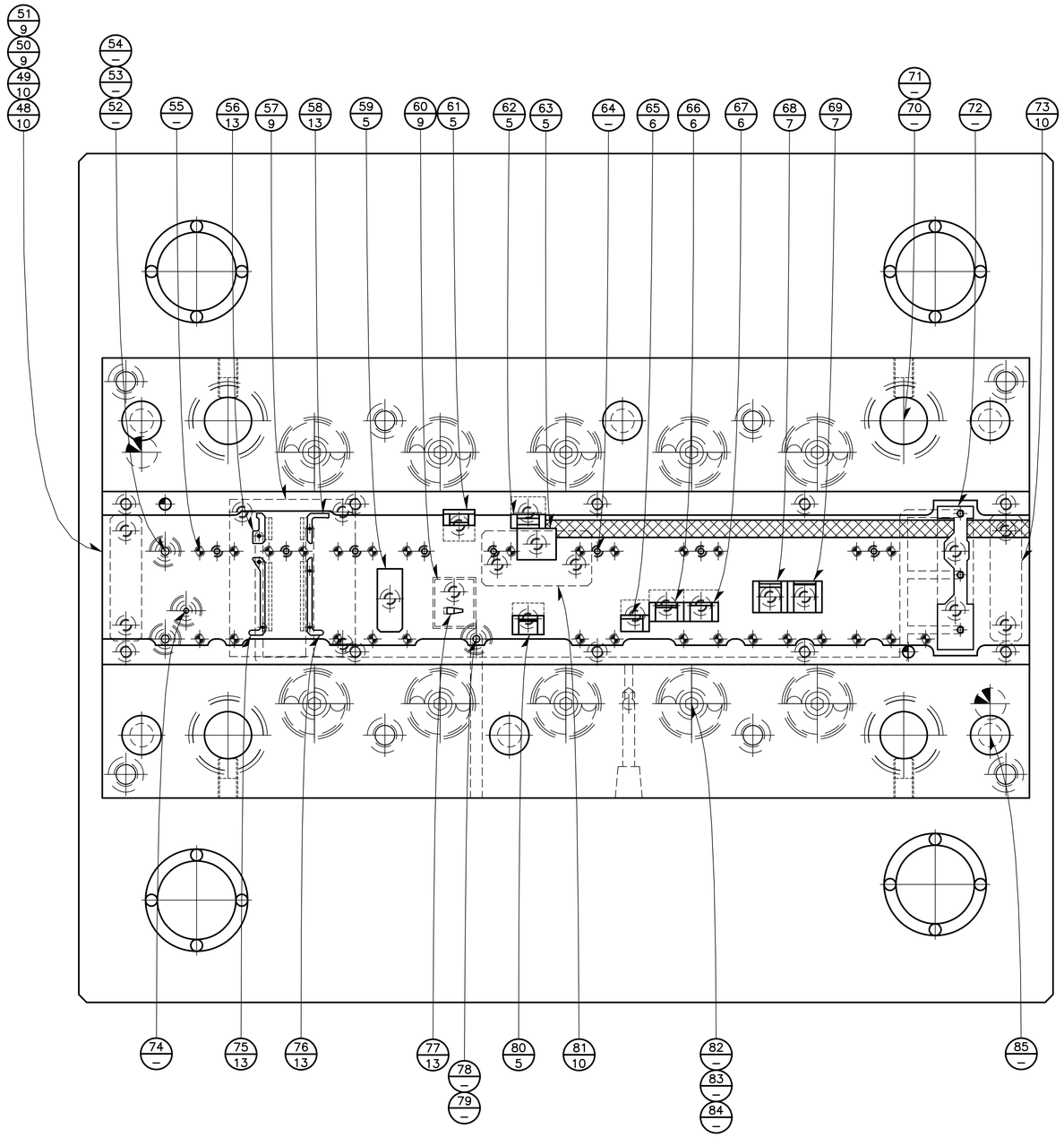

Jergens	85	6	Pur.	Rest Button, Cat.#45727	–
	84	10	Pur.	1 1/8–12 Unified Scr. Plug	–
"Danly"	83	10	Pur.	1"øSprg. Cat.#9–1607–36	1.75 Lg
Alter	82	10	Pur.	1/2"ø Stripper Bolt	1.25 Lg
	81	1	A–2	.174 x .875 x 1.750	58–60
	80	1	M–4	.500 x .500 x 2.020	62–64
"Danly"	79	1	Pur.	3/8"øSprg. Cat.#9–0608–11	2.0 Lg
"Perfekt"	78	1	Pur.	N–RP 18–237–87 A2 P.110	–
	77	1	M–4	Wire Cut, 1.978" Lg.	62–64
	76	1	M–4	Wire Cut, 2.00" Lg.	62–64
	75	1	M–4	Wire Cut, 2.00" Lg.	62–64
"Perfekt"	74	1	Pur.	N–REP 18–200–43 M2 P.079	–
	73	2	A–2	.174 x .500 x 2.000	58–60
	72	1	M–4	Wire Cut, 2.150" Lg.	62–64
7/8" Lg.	71	4	Pur.	Ground Bush., Cat. #HG–75	–
"Lamina"	70	4	Pur.	Grd. Pin, Cat.#SGP–75 5"Lg.	–
	69	1	M–4	.500 x .550 x 2.020	62–64
	68	1	M–4	.500 x .550 x 2.020	62–64
	67	1	M–4	.500 x .550 x 2.050	62–64
	66	1	M–4	.500 x .550 x 2.050	62–64
	65	1	M–4	.450 x .500 x 2.050	62–64
"Perfekt"	64	8	Pur.	.089"ø Sprg. Pin, Cat.#4EJPS	–
	63	1	M–4	.500 x .500 x .620	62–64
	62	1	M–4	.500 x .550 x 1.930	62–64
	61	1	M–4	.500 x .500 x 2.050	62–64
	60	1	A–2	.620 x .750 x 1.200	58–60
	59	1	M–4	.400 x 1.000 x 1.924	62–64
	58	1	M–4	Wire Cut, 2.00" Lg.	62–64
	57	1	A–2	.750 x 2.000 x 2.500	58–60
	56	1	M–4	Wire Cut, 2.00" Lg.	62–64
"Perfekt"	55	29	Pur.	N–RQPP M2 .1250 .510 W.L.	–
	54	4	Pur.	1/2–20 Unified Scr. Plug	–
	53	3	Pur.	3/8"ø Dowel	–
"Perfekt"	52	2	Pur.	N–REP 18–200–43 M2 P.126	–
	51	1	A–2	.375 x 7.000 x 14.750	58–60
	50	1	A–6	.750 x 7.000 x 14.750	58–60
	49	1	A–6	.750 x 7.000 x 14.750	58–60
	48	1	A–6	.500 x 2.750 x 14.750	58–60
DET.	REQ'D	MAT'L	FINISHED SIZE		Rc

Notes:
1. See Sheet #12 For Punch Shoe.

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CAD FILE:	FORMDIE–2	DATE	SHT. NO. 2 of 13
DRAWN BY:	M. Dennis	05–17–08	
CHECKED:	M. Dennis	05–17–08	SCALE 1 = 1
APPROVED:	–	04–01–06	
PART NO.	87654321		TOOL NO. 03–500
PART NAME	Bracket		

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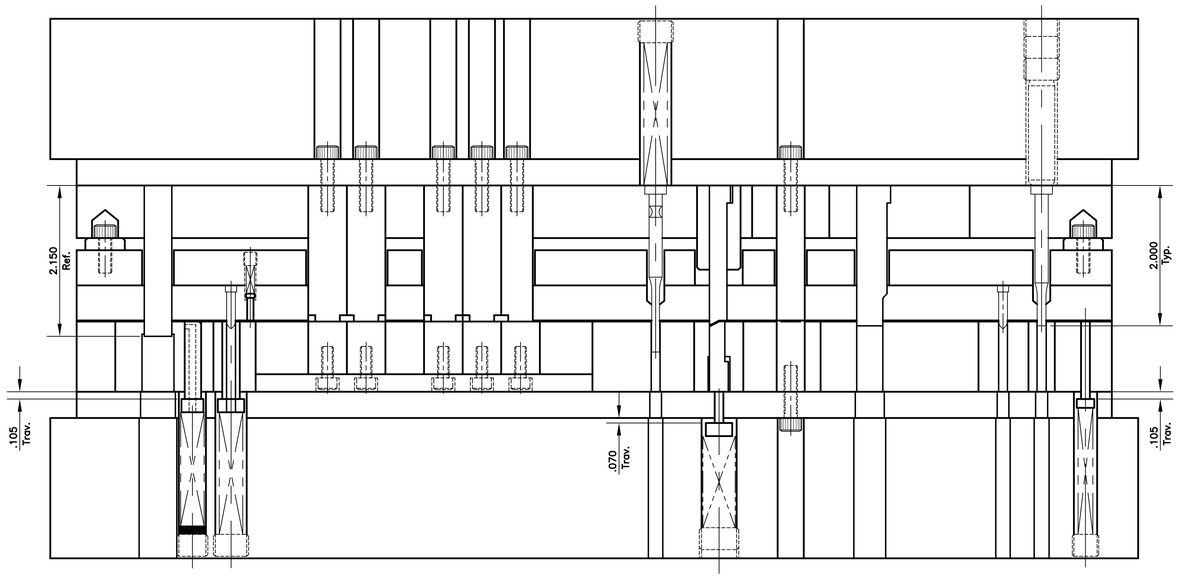

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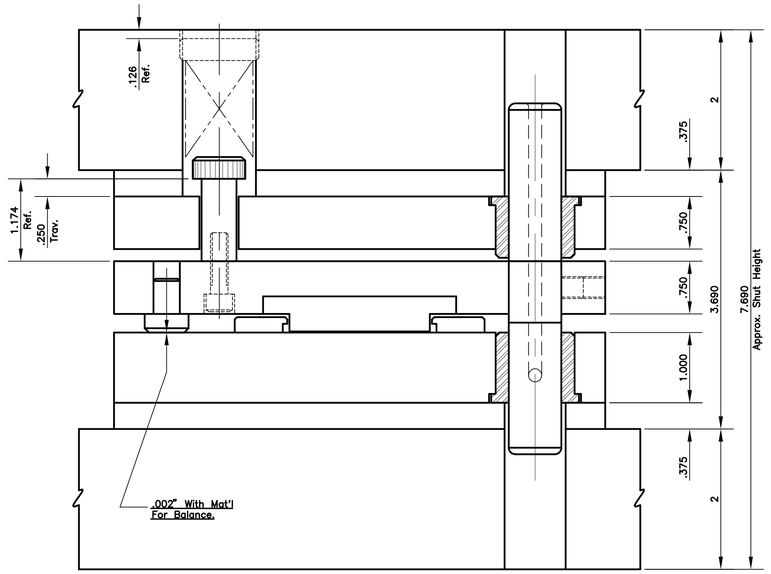

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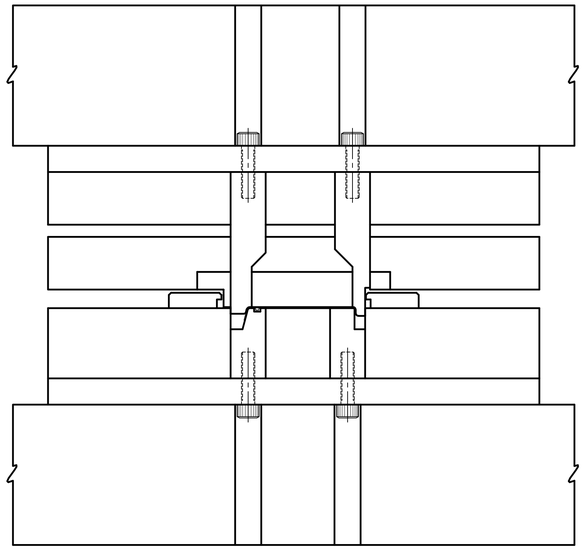

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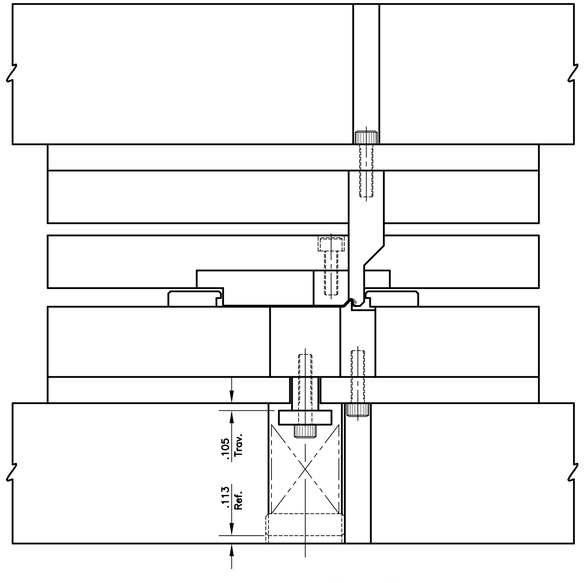

Section D–D

Advanced Designs, Inc. Powers Lake, Wis.			
CUST. Your Customer			
CAD FILE: FORMDIE-3	DATE	SHT. NO. 3 of 13	
DRAWN BY: M. Dennis	05-17-08		
CHECKED: M. Dennis	05-17-08	SCALE 1 = 1	
APPROVED: –	04-01-06		
PART NO. 87654321		TOOL NO. 03-500	
PART NAME Bracket			

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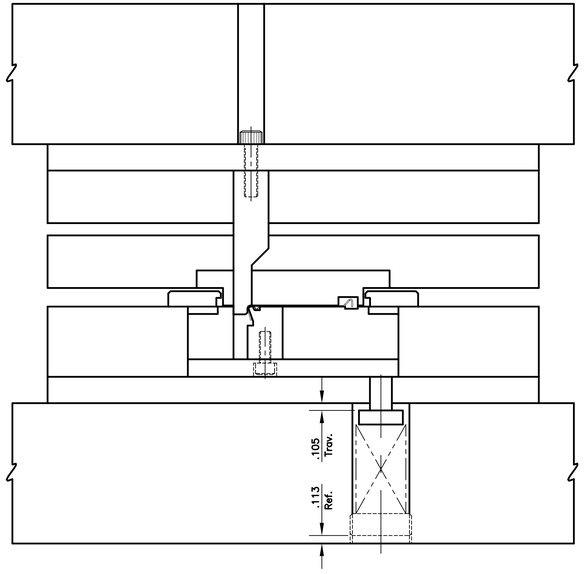

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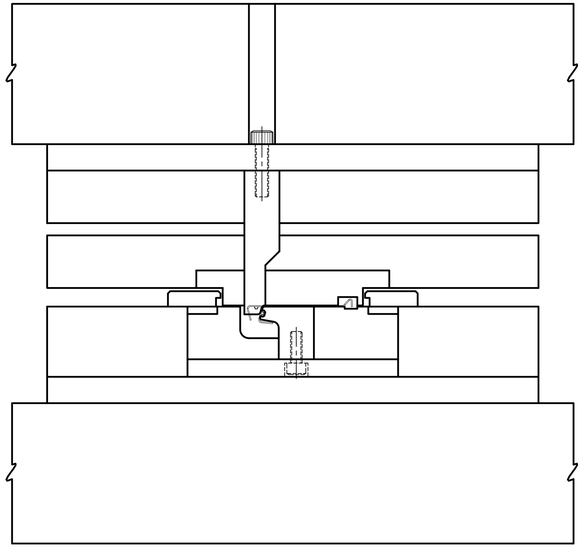

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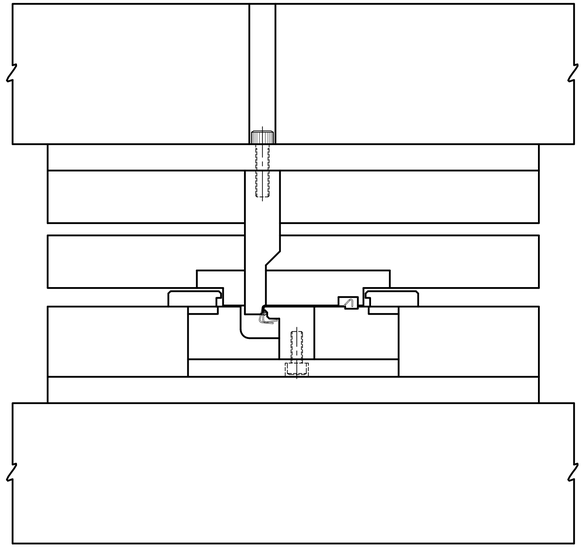

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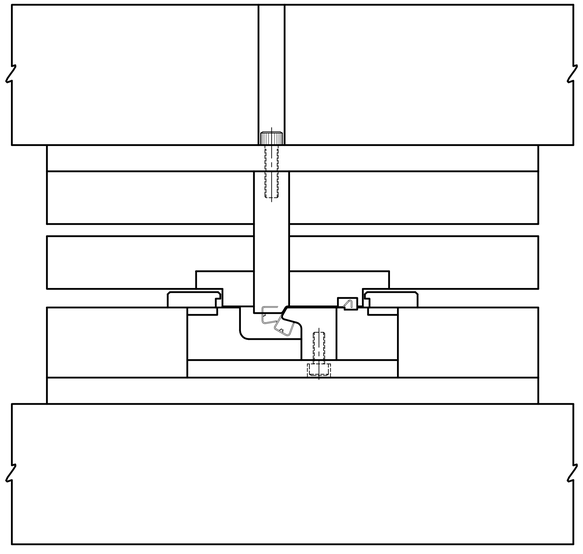

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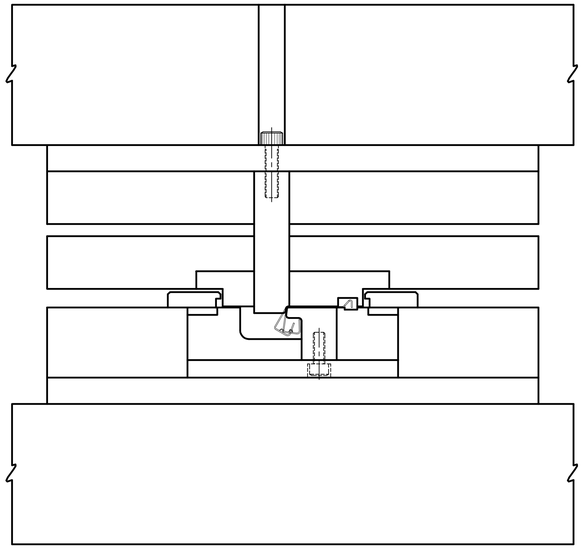

Section **I–I**

Advanced Designs, Inc. **Powers Lake, Wis.**			
CUST.	**Your Customer**		
CAD FILE:	FORMDIE-4	DATE	SHT. NO. 4 of 13
DRAWN BY:	M. Dennis	05-17-08	
CHECKED:	M. Dennis	05-17-08	SCALE 1 = 1
APPROVED:	–	04-01-06	
PART NO.	87654321		TOOL NO. 03-500
PART NAME	Bracket		

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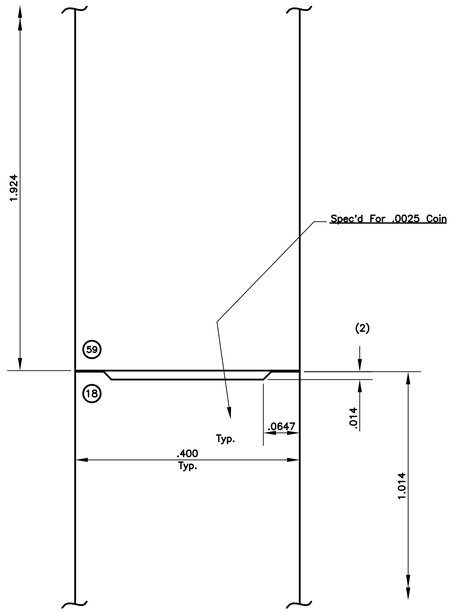

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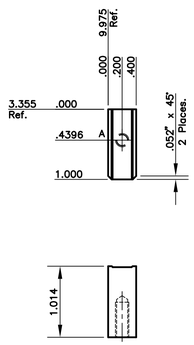
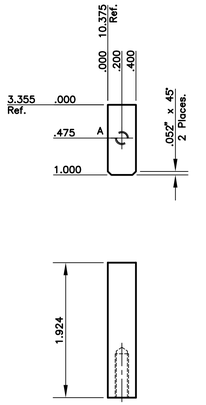
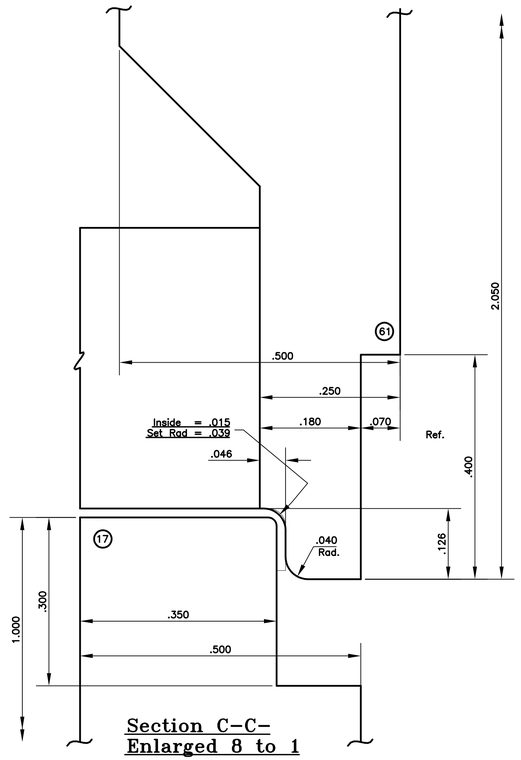


18 Coin Insert 1 req.d
M–4 Rc 62–64



59 Coin Anvil 1 req.d
M–4 Rc 62–64

Hole Data
A = Drill & Tap For Side For #10–32 Thread.



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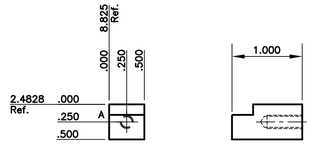
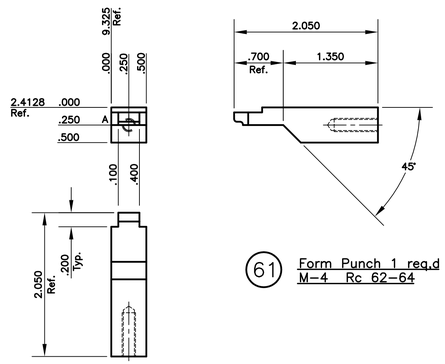
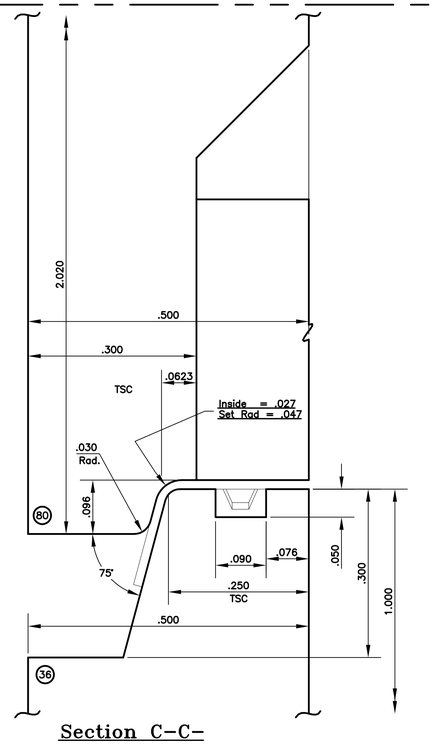


17 Form Insert 1 req.d
M–4 Rc 62–64



61 Form Punch 1 req.d
M–4 Rc 62–64



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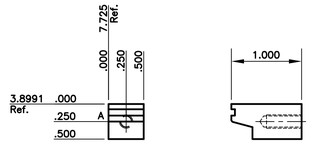
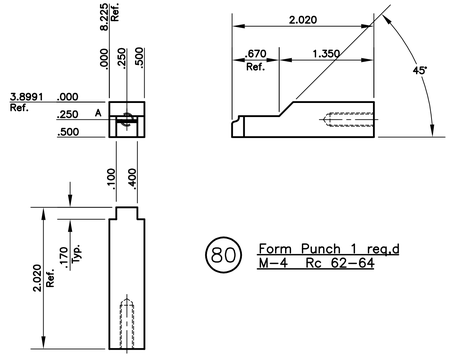


36 Form Insert 1 req.d
M–4 Rc 62–64



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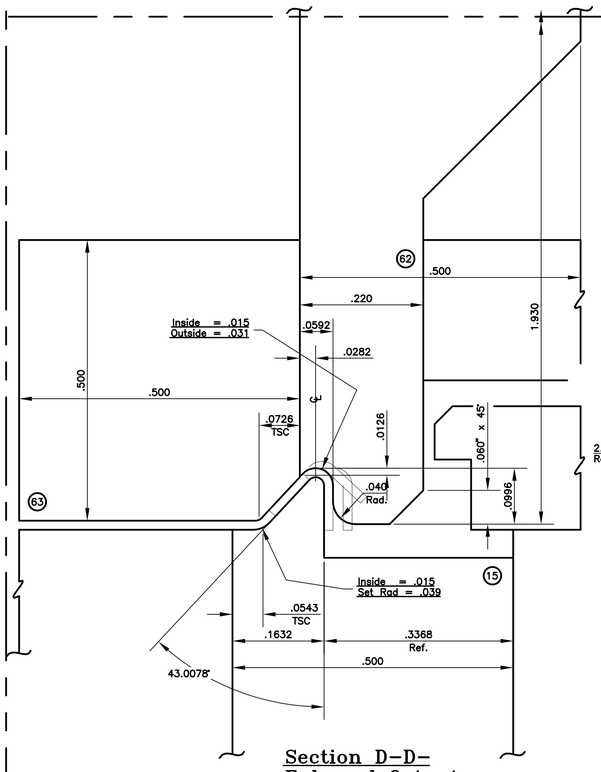
M–4 Rc 62–64



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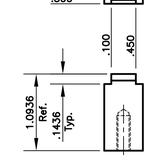

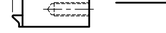

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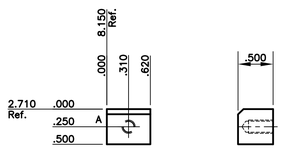
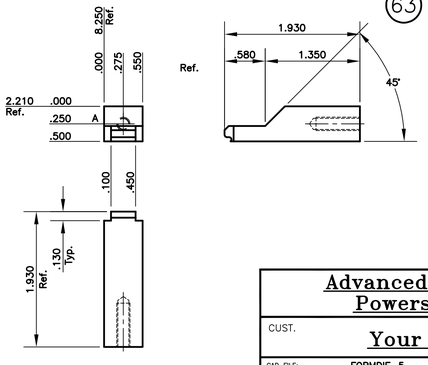
M–4 Rc 62–64





63 Stripper Insert 1 req.d
M–4 Rc 62–64

62 Form Punch 1 req.d
M–4 Rc 62–64

Advanced Designs, Inc. Powers Lake, Wis.			
CUST.	Your Customer		
CAD FILE:	FORMDIE–5	DATE	SHT. NO. 5 of 13
DRAWN BY:	M. Dennis	05–17–08	
CHECKED:	M. Dennis	05–17–08	SCALE 1 = 1
APPROVED:	–	04–01–06	
PART NO.	87654321		TOOL NO. 03–500
PART NAME	Bracket		

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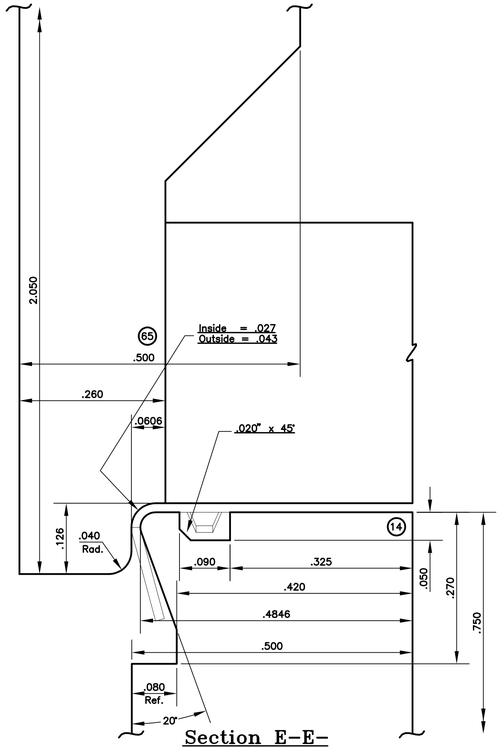

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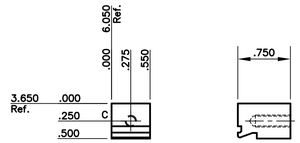
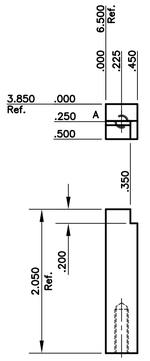
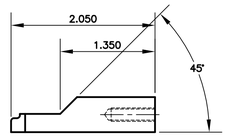
Enlarged 8 to 1

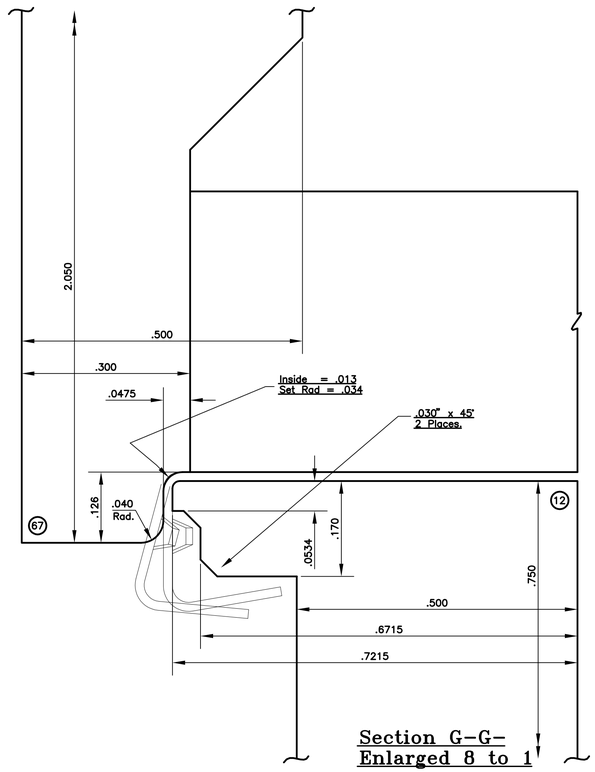


14 Form Insert 1 req,d
M-4 Rc 62-64





65 Form Punch 1 req,d
M-4 Rc 62-64



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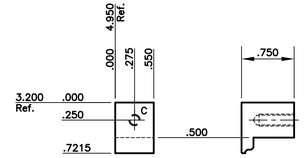
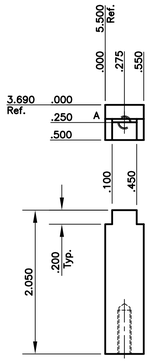
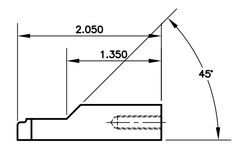
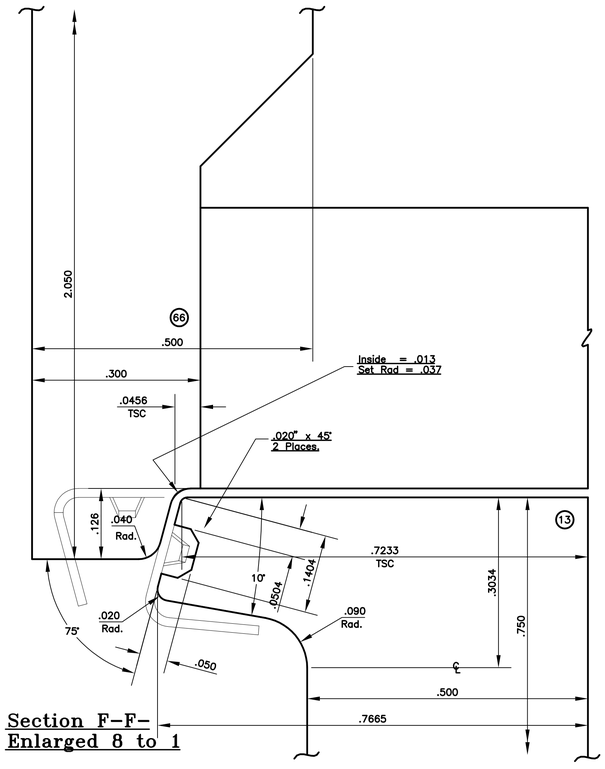


12 Form Insert 1 req,d
M-4 Rc 62-64

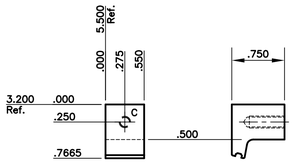




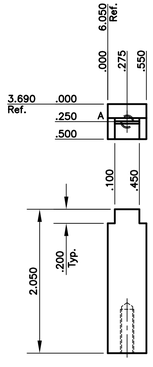
67 Form Punch 1 req,d
M-4 Rc 62-64

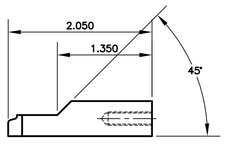


Section F-F-
Enlarged 8 to 1



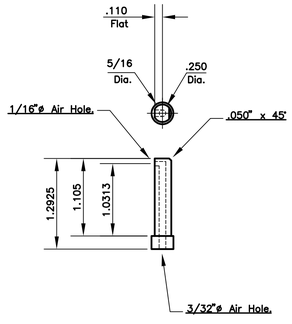
13 Form Insert 1 req,d
M-4 Rc 62-64



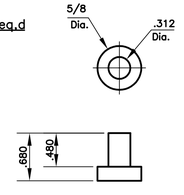


66 Form Punch 1 req,d
M-4 Rc 62-64

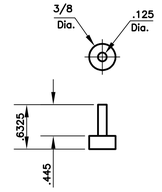
Hole Data
A = Drill & Tap Far Side For #10-32 Thread.
B = .1260"ø Pilot Hole, Tap Far Side For #10-32 Set Scr.
C = Drill & Tap Far Side For #8-32 Thread.



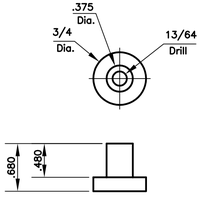
5 Lifter/Air Eject 1 req,d
Purchase Rc -



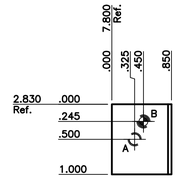
30 Transfer Pin 6 req,d
A-2 Rc 58-60

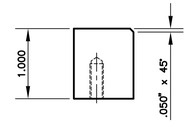


41 Transfer Pin 1 req,d
A-2 Rc 58-60



37 Transfer Pin 1 req,d
A-2 Rc 58-60





16 Pressure Pad 1 req,d
A-2 Rc 58-60

Advanced Designs, Inc. **Powers Lake, Wis.**	
CUST. **Your Customer**	
CAD FILE: FORMDIE-6	DATE:
DRAWN BY: M. Dennis	05-17-08
CHECKED: M. Dennis	05-17-08
APPROVED: -	04-01-06
PART NO. 87654321	SHT. NO. 6 of 13
PART NAME Bracket	SCALE 1 = 1
	TOOL NO. 03-500

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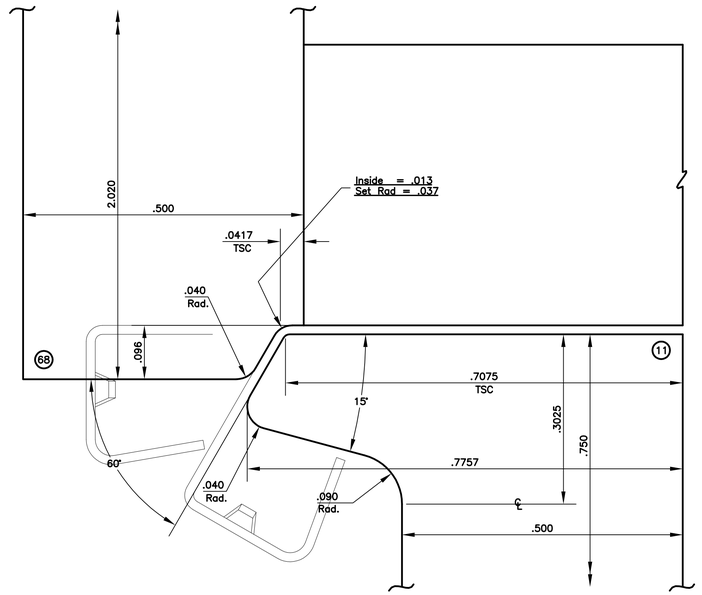
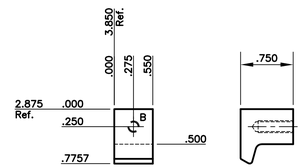
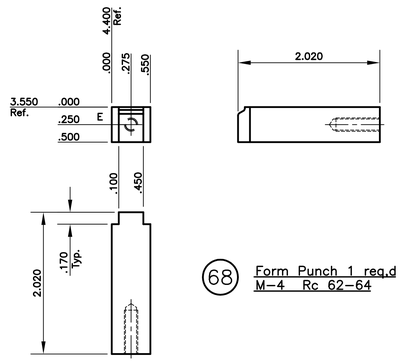


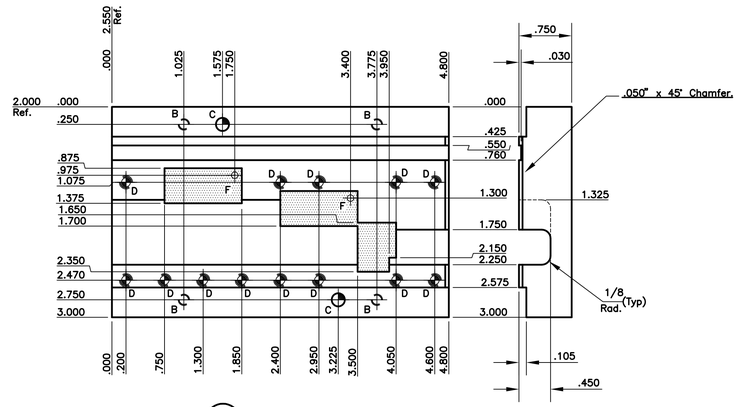
Section H–H



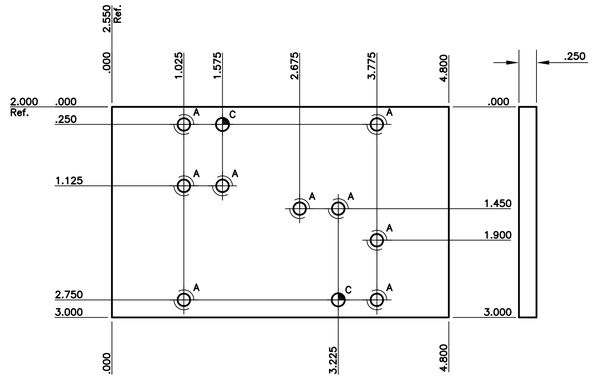
11 Form Insert 1 req.d
M–4 Rc 62–64



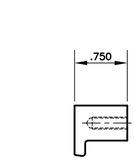
68 Form Punch 1 req.d
M–4 Rc 62–64

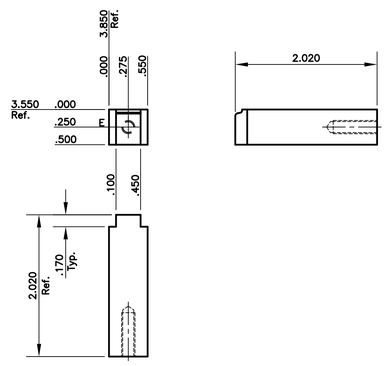


33 Pressure Pad 1 req.d
A–2 Rc 58–60

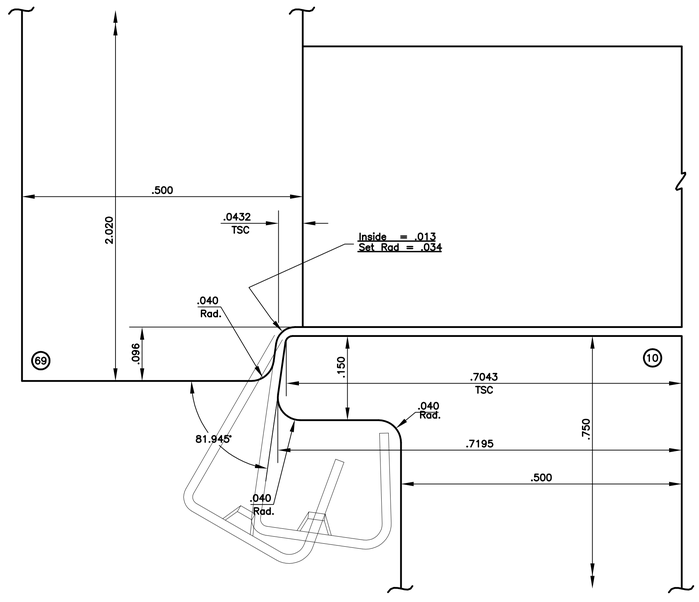


34 Mounting Plate 1 req.d
A–2 Rc 58–60



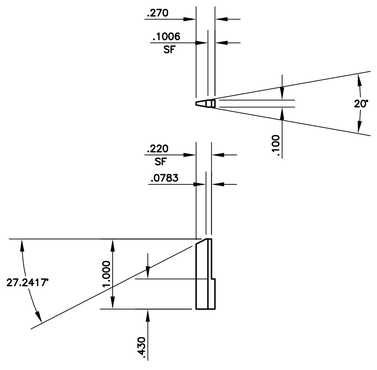


69 Form Punch 1 req.d
M–4 Rc 62–64



Section I–I

Hole Data
A = Drill & C'Bore Far Side For #8–32 SHCS.
B = Drill & Tap Far Side For #8–32 Thread.
C = 3/16"ø Dowel Thru.
D = .1260"ø Pilot Hole, Tap Far Side For #10–32 Set Scr.
E = Drill & Tap Far Side For #10–32 Thread.
F = 3/32"ø Wire Start Hole.



40 Die Insert 1 req.d
M–4 Rc 62–64

Advanced Designs, Inc. Powers Lake, Wis.			
CUST.	Your Customer		
CAD FILE:	FORMDIE–7	DATE	SHT. NO. 7 of 13
DRAWN BY:	M. Dennis	05–17–08	
CHECKED:	M. Dennis	05–17–08	SCALE 1 = 1
APPROVED:	–	04–01–06	
PART NO.	87654321		TOOL NO. 03–500
PART NAME	Bracket		

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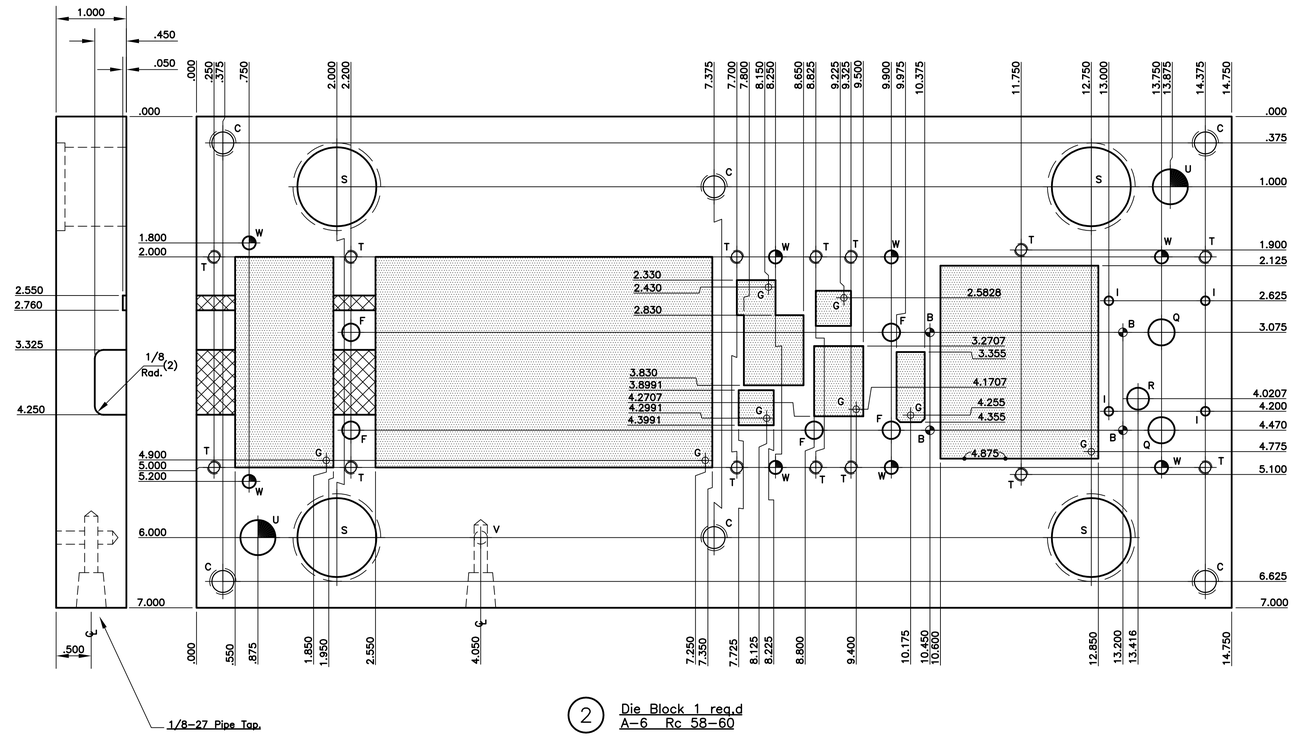
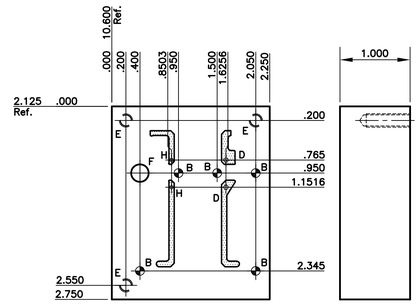
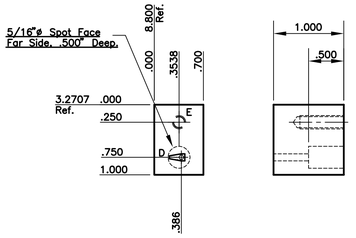


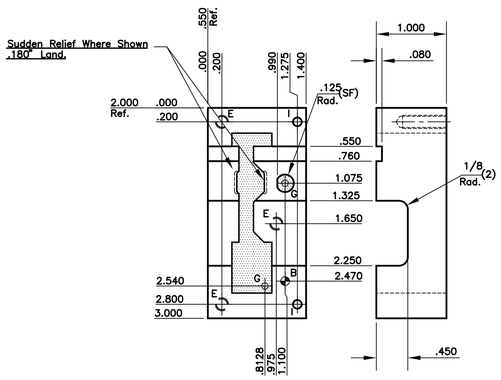
2 Die Block 1 req,d
A–6 Rc 58–60



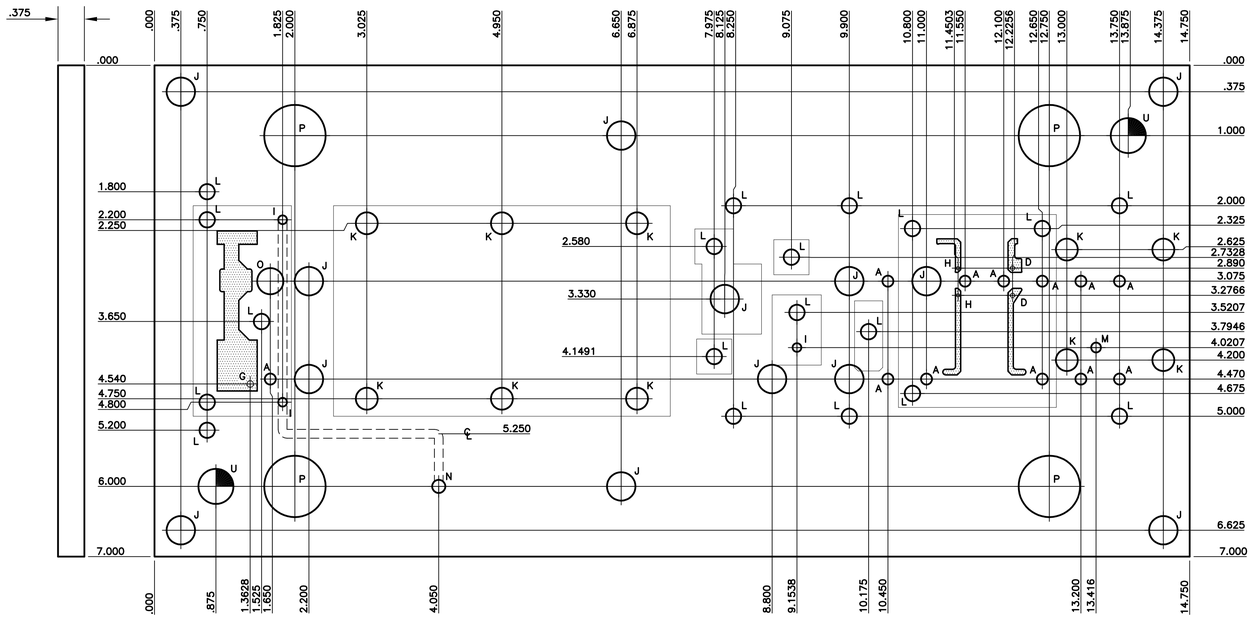
22 Die Insert 1 req,d
M–4 Rc 62–64



44 Die Insert 1 req,d
M–4 Rc 62–64



4 Die Insert 1 req,d
M–4 Rc 62–64



3 Backup Plate 1 req,d
A–2 Rc 58–60

Hole Data
A = 5/32"ø Drill Thru.
B = .1260"ø Pilot Hole.
C = Drill & Tap For 3/8–16 Thread.
D = 1/16"ø Wire Start Hole.
E = Drill & Tap For Side For #10–32 Thread.
F = .2500"ø Hole Thru. (S.F. Pilot Spools)
G = 3/32"ø Wire Start Hole.
H = 3/64"ø Wire Start Hole.
I = 1/8"ø Drill Thru.
J = 13/32"ø Drill Thru.
K = 5/16"ø Drill Thru.
L = 7/32"ø Drill Thru.
M = 9/64"ø Drill Thru.
N = 3/16"ø Drill Thru.
O = 3/8"ø Drill Thru.
P = 7/8"ø Drill Thru.
Q = .3750"ø Hole Thru. (P.F. Bushings)
R = .3125"ø Hole Thru. (P.F. Bushing)
S = 1.1250"ø Thru & C'Bore For Side 1 1/4"ø x .125" Deep.
T = Drill & Tap For #10–32 Thread.
U = 1/2"ø Dowel Thru.
V = 3/16"ø Drill x 5/8" Deep, For Side.
W = 3/16"ø Dowel Thru.

Advanced Designs, Inc.	
Powers Lake, Wis.	
CUST.	Your Customer
CAD FILE: FORMDIE–8	DATE
DRAWN BY: M. Dennis	05–17–08
CHECKED: M. Dennis	05–17–08
APPROVED: –	04–01–06
SHT. NO.	8 of 13
SCALE	1 = 1
PART NO.	87654321
TOOL NO.	03–500
PART NAME	Bracket

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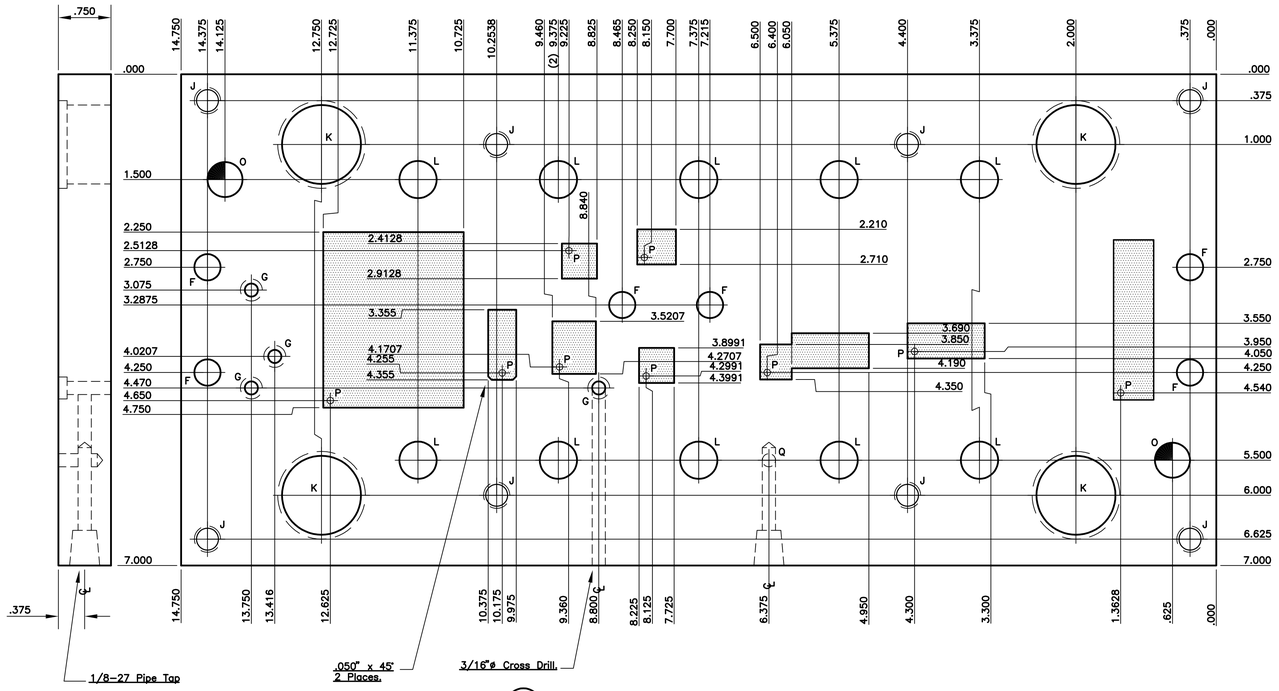
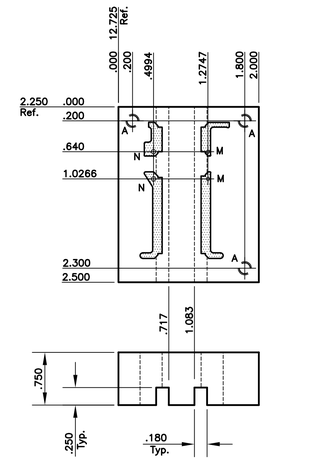
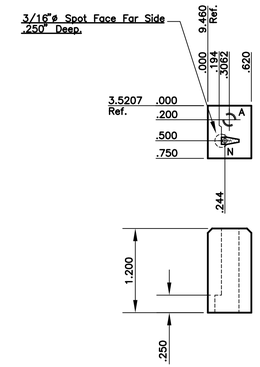
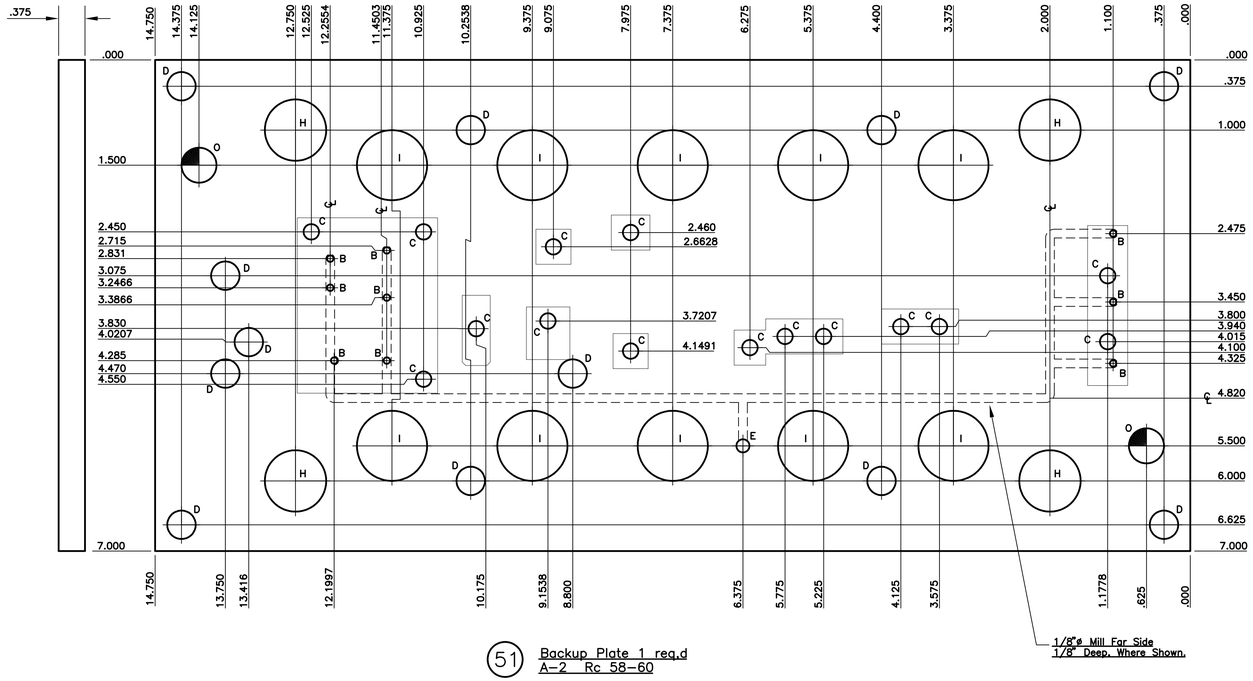


50 Punch Pad 1 req.d
A–6 Rc 58–60



57 Punch Retainer 1 req.d
A–2 Rc 58–60





51 Backup Plate 1 req.d
A–2 Rc 58–60

60 Punch Retainer 1 req.d
A–2 Rc 58–60

Hole Data
A = Drill & Tap Far Side For #10–32 Thread.
B = 3/32"ø Drill Thru.
C = 7/32"ø Drill Thru.
D = 13/32"ø Drill Thru.
E = 3/16"ø Drill Thru.
F = 3/8"ø Drill x 1/4" Deep.
G = .1875"ø Thru & C'Bore Far Side 5/16"ø x .125" Deep.
H = 7/8"ø Drill Thru.
I = 1"ø Drill Thru.
J = Drill & Tap For 3/8–16 Thread.
K = 1.1250"ø Thru & C'Bore Far Side 1 1/4"ø x .125" Deep.
L = 17/32"ø Drill Thru.
M = 3/64"ø Wire Start Hole.
N = 1/16"ø Wire Start Hole.
O = 1/2"ø Dowel Thru.
P = 3/32"ø Wire Start Hole.
Q = 3/16"ø Drill x 9/16" Deep, Far Side.

Advanced Designs, Inc. Powers Lake, Wis.			
CUST.	Your Customer		
CAD FILE:	FORMDIE–9	DATE	SHT. NO. 9 of 13
DRAWN BY:	M. Dennis	05–17–08	
CHECKED:	M. Dennis	05–17–08	SCALE 1 = 1
APPROVED:	–	04–01–06	
PART NO.	87654321		TOOL NO. 03–500
PART NAME	Bracket		

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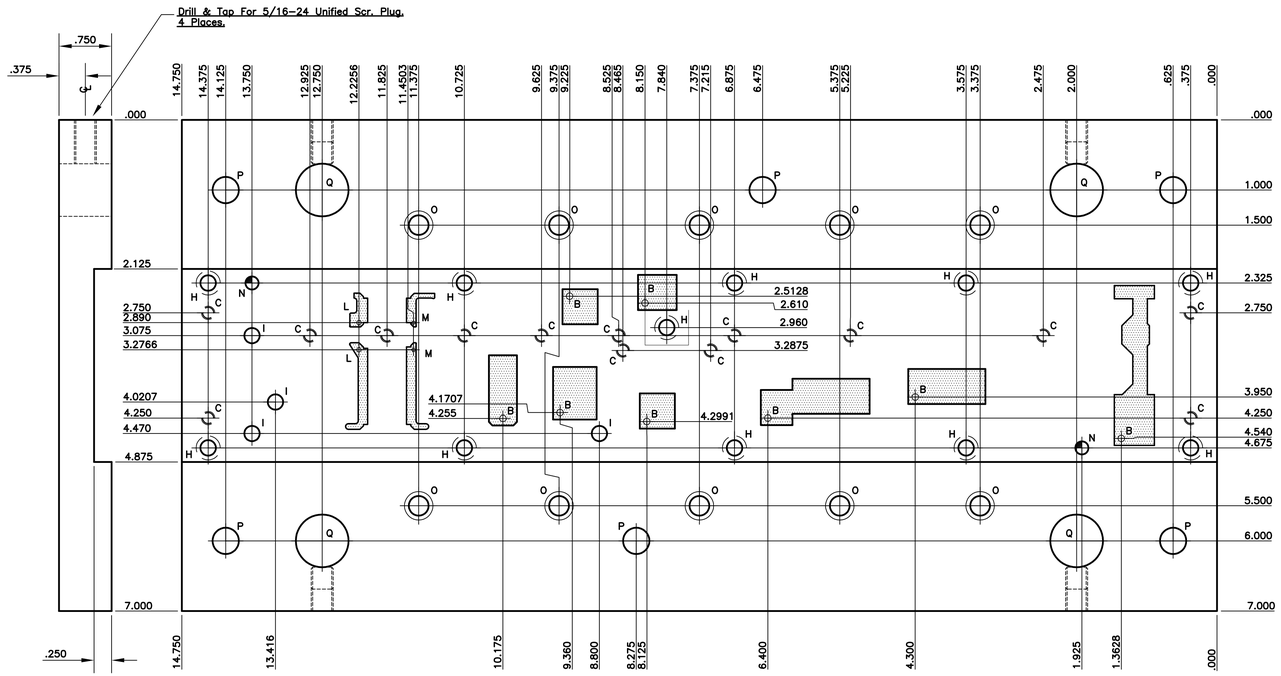
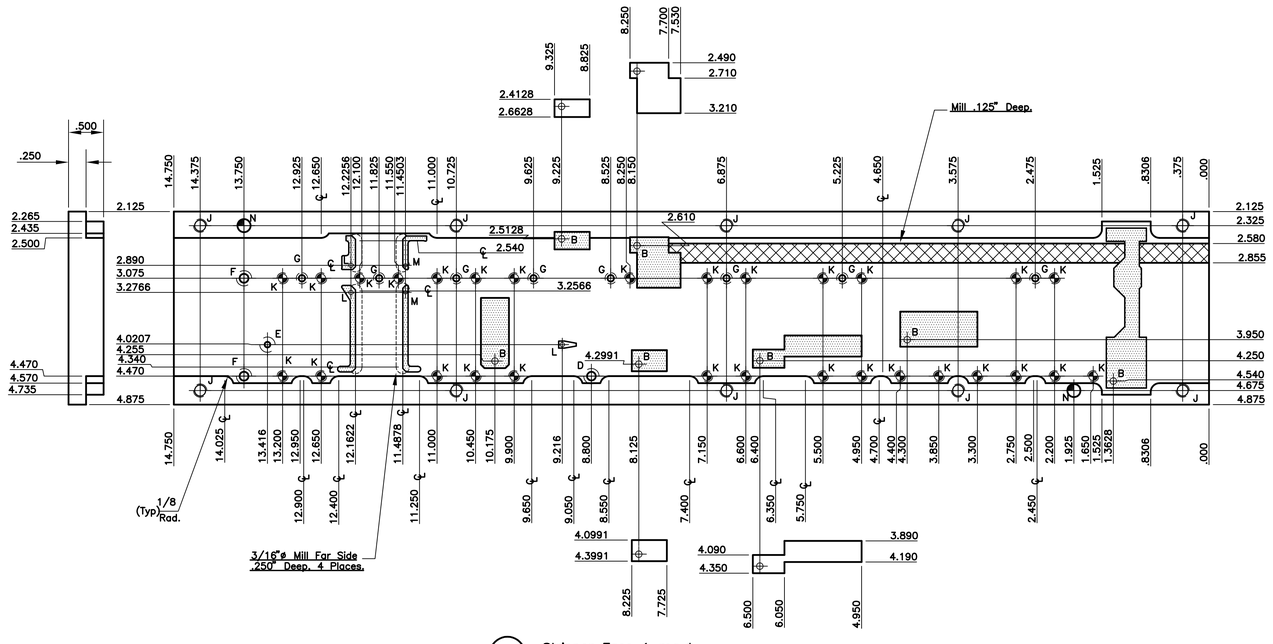
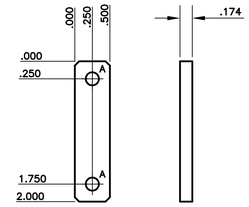


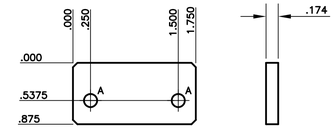
(49) Stripper Yoke 1 req.d
A-6 Rc 58-60



(48) Stripper Face 1 req.d
A-6 Rc 58-60



(73) Bottom Pad 2 req.d
A-2 Rc 58-60



(81) Bottom Pad 1 req.d
A-2 Rc 58-60

Hole Data
A = 3/16"ø Drill Thru.
B = 3/32"ø Wire Start Hole.
C = Drill & Tap Far Side For #10-32 Thread.
D = .1250"ø Thru & Drill Far Side 7/32"ø x 7/32" Dp.
E = .0800"ø Thru & Drill Far Side 7/32"ø x 7/32" Dp.
F = .1270"ø Thru & Drill Far Side 7/32"ø x 7/32" Dp.
G = 3/32"ø Thru & C'Bore Far Side 5/32"ø x .210" Deep.
H = Drill & C'Bore Far Side For #10-32 SHCS.
I = 7/32"ø Drill Thru.
J = Drill & Tap For #10-32 Thread.
K = .1250"ø Thru, C'Bore Far Side 5/32"ø x 3/32" Dp.
L = 1/16"ø Wire Start Hole.
M = 3/64"ø Wire Start Hole.
N = 3/16"ø Dowel Thru.
O = Drill & C'Bore For 1/4-20 SHCS.
P = .3750"ø Hole Thru. (P.F. Balancers)
Q = .7510"ø Hole Thru. (P.F. Subliners)

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CUST.	**Your Customer**		
CAD FILE:	FORMDIE-10	DATE	SHT. NO. 10 of 13
DRAWN BY:	M. Dennis	05-17-08	
CHECKED:	M. Dennis	05-17-08	SCALE 1 = 1
APPROVED:	-	04-01-06	
PART NO.	87654321		TOOL NO. 03-500
PART NAME	Bracket		

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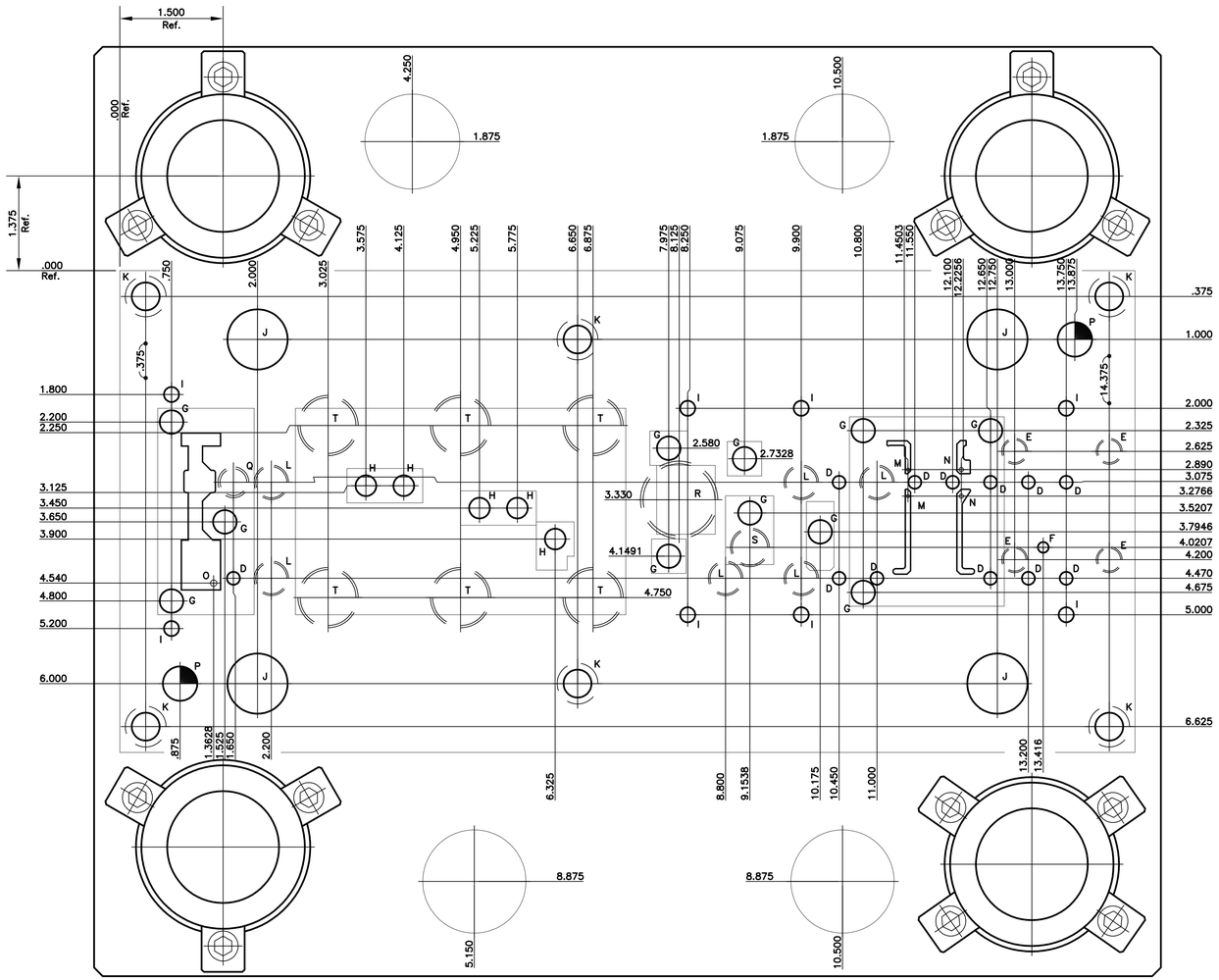
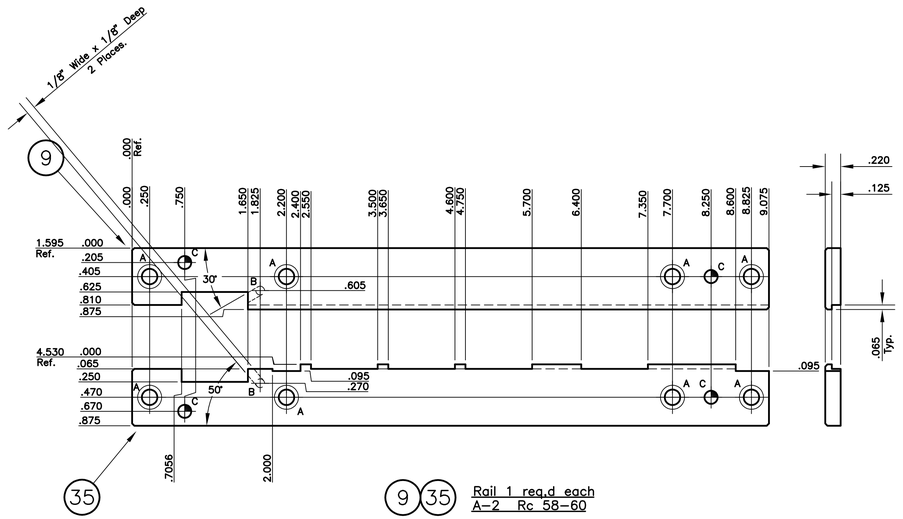
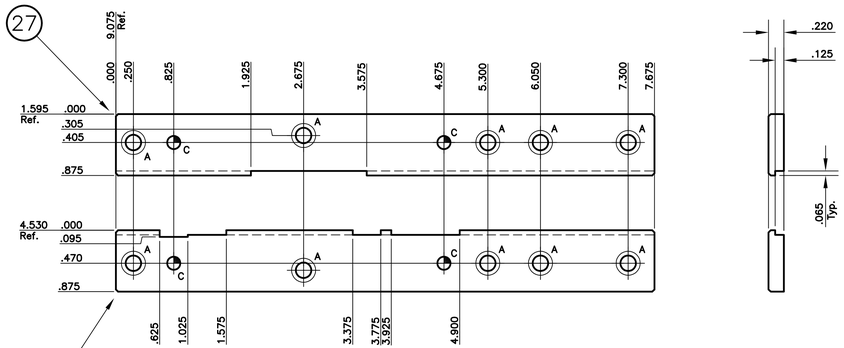


(1) Die Shoe 1 req.d
Purchase Rc –



(9)(35) Rail 1 req.d each
A–2 Rc 58–60



(27)(47) Rail 1 req.d each
A–2 Rc 58–60

Hole Data
A = Drill & C'Bore For #10–32 LHCS.
B = 1/8"ø Spot Face x .125 Deep, Far Side.
C = 3/16"ø Dowel Thru.
D = 3/16"ø Drill Thru.
E = Drill & Tap for 3/8–24 Unified Screw Plug.
F = 5/32"ø Drill Thru.
G = 11/32"ø Drill Thru.
H = 19/64"ø Drill Thru.
I = 7/32"ø Drill Thru.
J = 7/8"ø Drill Thru.
K = Drill & C'Bore Far Side For 3/8–16 SHCS.
L = Drill & Tap for 1/2–20 Unified Screw Plug.
M = 3/64"ø Wire Start Hole.
N = 1/16"ø Wire Start Hole.
O = 3/32"ø Wire Start Hole.
P = 1/2"ø Dowel Thru.
Q = Drill & Tap for 7/16–20 Unified Screw Plug.
R = Drill & Tap for 1 1/8–12 Unified Screw Plug.
S = Drill & Tap for 9/16–18 Unified Screw Plug.
T = Drill & Tap for 7/8–14 Unified Screw Plug.

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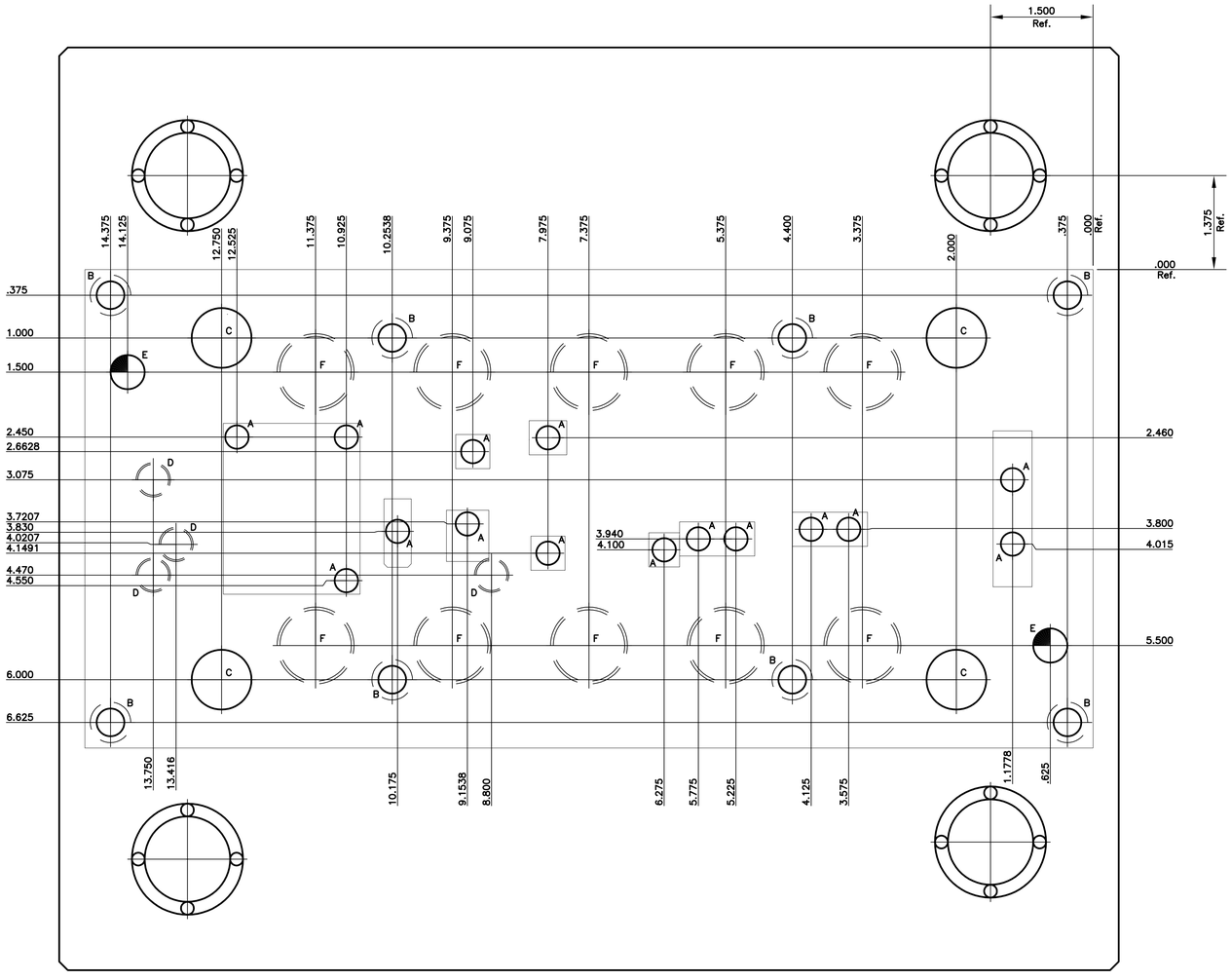
CAD FILE:	FORMDIE–11	DATE	SHT. NO. 11 of 13
DRAWN BY:	M. Dennis	05–17–08	
CHECKED:	M. Dennis	05–17–08	SCALE 1 = 1
APPROVED:	–	04–01–06	
PART NO.	87654321		TOOL NO. 03–500
PART NAME	Bracket		



Hole Data
A = 11/32"ø Drill Thru.
B = Drill & C'Bore For Side For 3/8–16 SHCS.
C = 7/8"ø Drill Thru.
D = Drill & Tap for 1/2–20 Unified Screw Plug.
E = 1/2"ø Dowel Thru.
F = Drill & Tap for 1 1/8–12 Unified Screw Plug.

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CAD FILE:	FORMDIE–12	DATE	SHT. NO. 12 of 13
DRAWN BY:	M. Dennis	05–17–08	
CHECKED:	M. Dennis	05–17–08	SCALE 1 = 1
APPROVED:	–	04–01–06	
PART NO.	87654321		TOOL NO. 03–500
PART NAME	Bracket		

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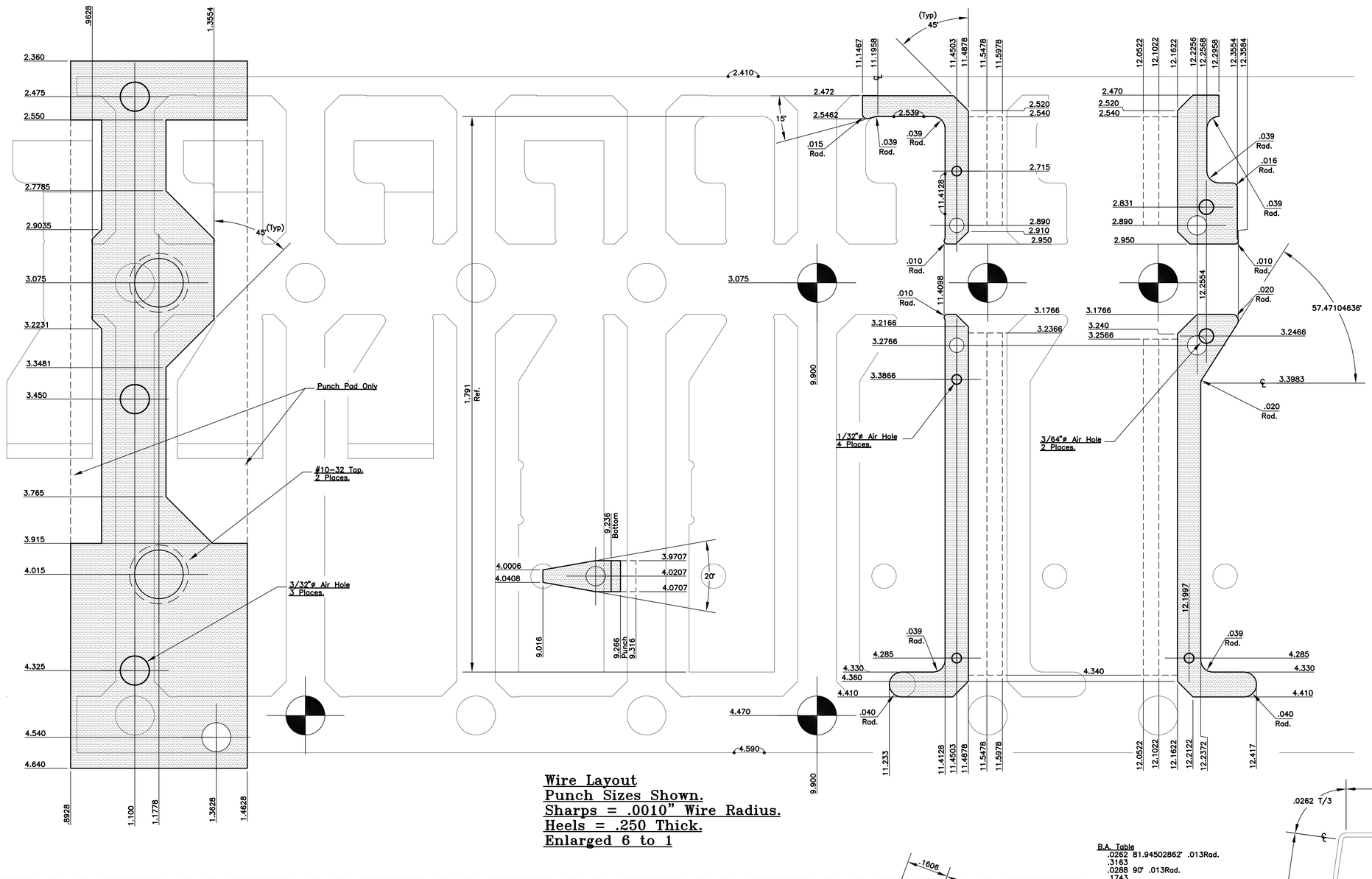
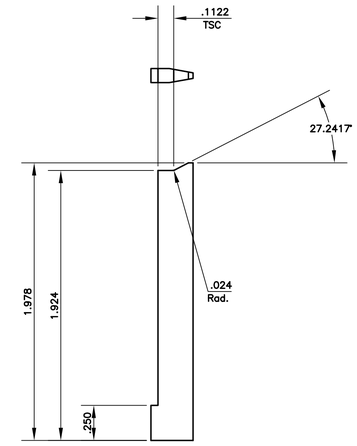
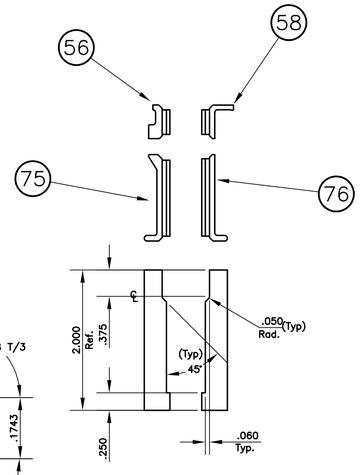
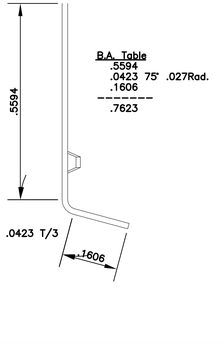




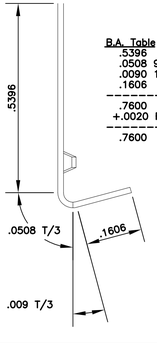
Enlarged 2 To 1 — (77) Shear Form Punch 1 req.d
M-4 Rc 62-64



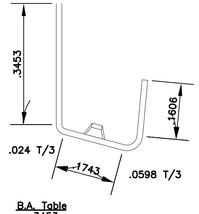
Wire Layout
Punch Sizes Shown.
Sharps = .0010" Wire Radius.
Heels = .250 Thick.
Enlarged 6 to 1



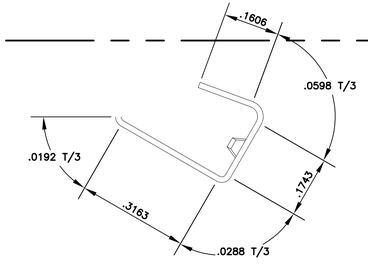
B.A. Table
.5594
.0423 75° .027Rad.
.1606
.7623



B.A. Table
.5396
.0508 90° .027Rad.
.0090 15.017° .029Rad.
.1606
.7600
+.0020 Radius Roll Out
.7600



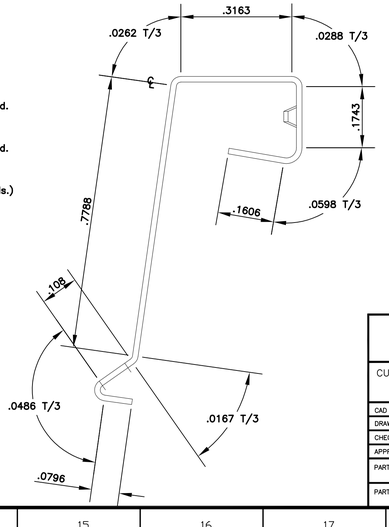
B.A. Table
.3453
.0240 75° .013Rad.
.1743
.0598 99.77887279° .029Rad.
.1606
.7640
-.0020 Stretch
.7620



B.A. Table
.0192 60.00002862° .013Rad.
.3163
.0288 90° .013Rad.
.1743
.0598 99.77887279° .029Rad.
.1606
.7590

B.A. Table
.0262 81.94502862° .013Rad.
.3163
.0288 90° .013Rad.
.1743
.0598 99.77887279° .029Rad.
.1606
.7660
-.0040 Stretch (2, .013 Rads.)
.7620

B.A. Table
.7788
.0167 46.99217079° .015Rad.
.1080
.0486 137.04714217° .015Rad.
.0796
1.0318
-.0028 Stretch (137° Bend)
1.0290



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CUST.	Your Customer		
CAD FILE:	FORMDIE-13	DATE	SHT. NO. 13 of 13
DRAWN BY:	M. Dennis	05-17-08	
CHECKED:	M. Dennis	05-17-08	SCALE 1 = 1
APPROVED:	-	04-01-06	
PART NO.	87654321		TOOL NO. 03-500
PART NAME	Bracket		