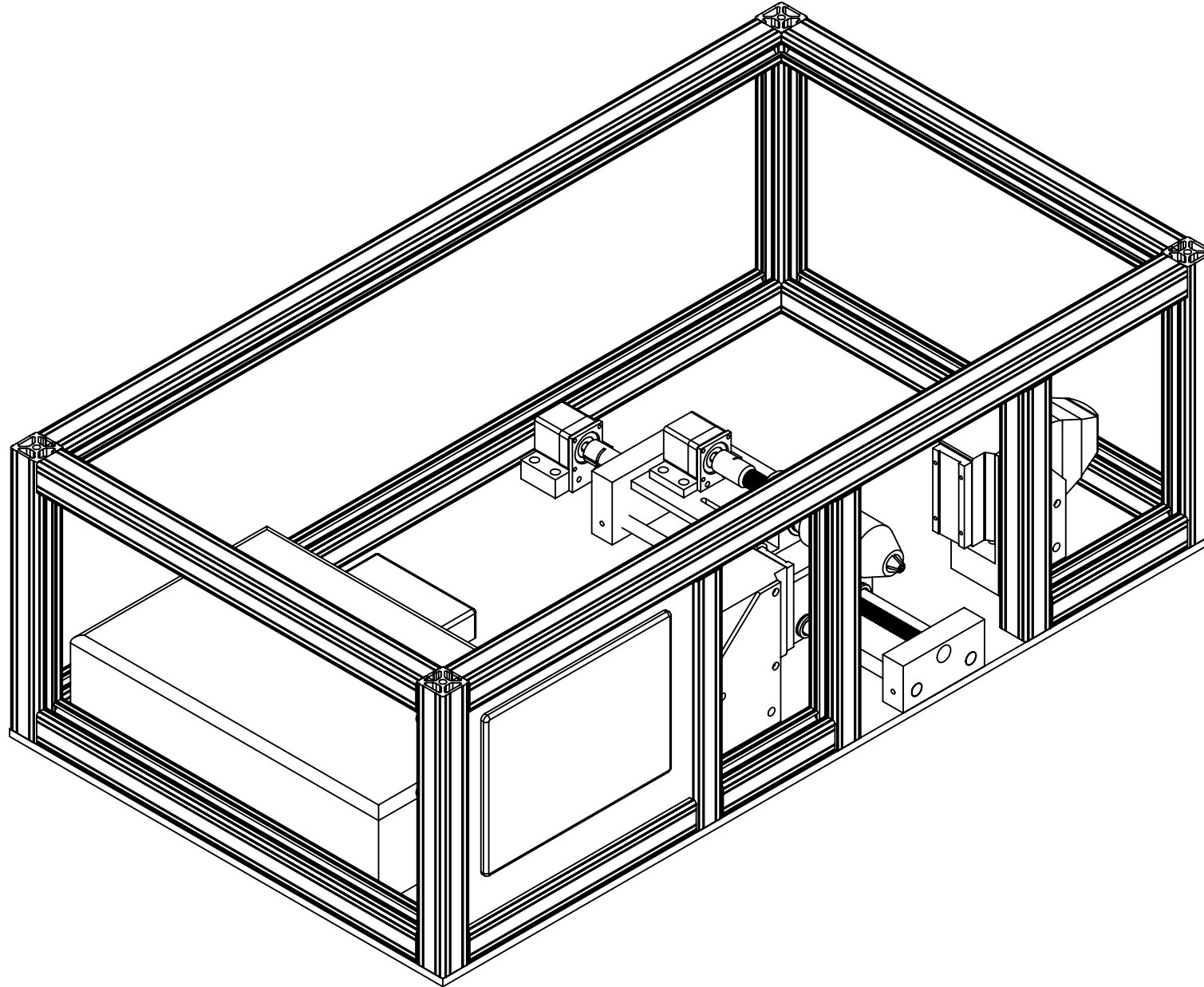


WARNING:  
 THIS DRAWING AND DATA EMBODY PROPRIETARY INFORMATION WHICH IS THE CONFIDENTIAL PROPERTY OF CHERRY AEROSPACE AND SHALL NOT BE COPIED NOR REPRODUCED. THIS DRAWING AND DATA SHALL NOT BE DISCLOSED TO NON-CHERRY PERSONNEL OR USED IN WHOLE OR IN PART FOR ANY PURPOSE WITHOUT THE EXPRESS WRITTEN PERMISSION OF CHERRY AEROSPACE. THIS DRAWING IS LOANED IN CONFIDENCE WITH THE UNDERSTANDING IT SHALL BE RETURNED ON DEMAND.



REV LTR	D.C.R. NO.	DATE	DR	CK	APP

DESCRIPTION:

DRAWING NO.

UNLESS OTHERWISE SPECIFIED:  
 DIMENSIONS ARE IN INCHES  
 REMOVE SHARP EDGES: .005 - .015  
 FILLETS: .015  
 TOLERANCES:  
 .XX = ±.01  
 .XXX = ±.005  
 .XXXX = ±.0005  
 ANGULAR: ±0°30'

TOTAL RUNOUT: .005 FIM  
 SURFACE FINISH:  
 OUTSIDE ✓  
 INSIDE ✓

DRAWN: \_\_\_\_\_ CHECKED: \_\_\_\_\_

DATE: \_\_\_\_\_ APPROVED: \_\_\_\_\_

NEXT OPERATION/ASSEMBLY: \_\_\_\_\_ SCALE: \_\_\_\_\_

SPEC. MATERIAL:  
 M- \_\_\_\_\_

SPEC. HEAT TREAT:  
 H- \_\_\_\_\_

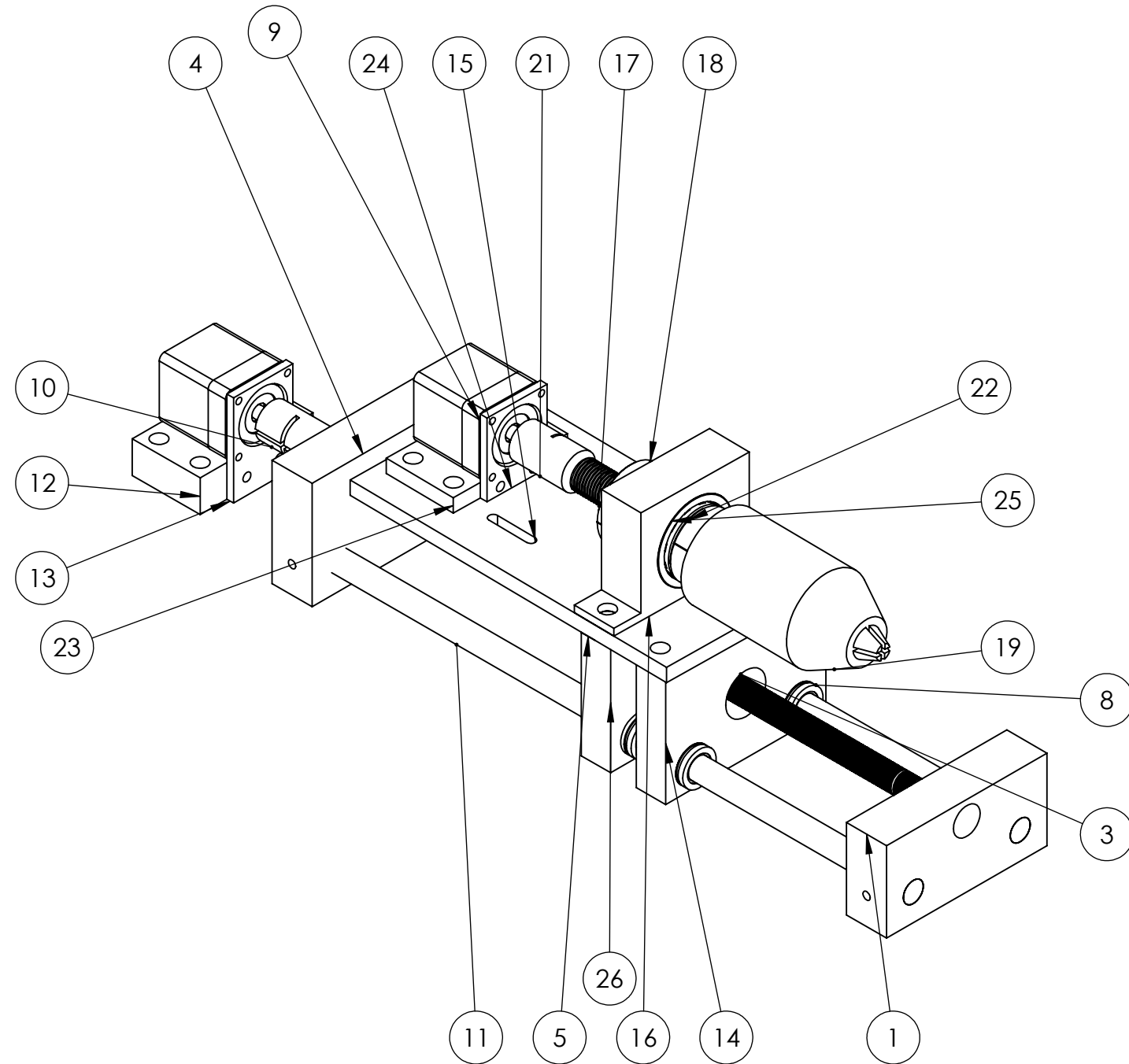
SPEC. FINISH:  
 C- \_\_\_\_\_

**CHERRY<sup>®</sup> AEROSPACE**  
 SPS Fastener Division, a PCC Company

TITLE: Rivetron

DRAWING NO. \_\_\_\_\_ REV \_\_\_\_\_

WARNING: THIS DRAWING AND DATA EMBODY PROPRIETARY INFORMATION WHICH IS THE CONFIDENTIAL PROPERTY OF CHERRY AEROSPACE AND SHALL NOT BE COPIED NOR REPRODUCED. THIS DRAWING AND DATA SHALL NOT BE DISCLOSED TO NON-CHERRY PERSONNEL OR USED IN WHOLE OR IN PART FOR ANY PURPOSE WITHOUT THE EXPRESS WRITTEN PERMISSION OF CHERRY AEROSPACE. THIS DRAWING IS LOANED IN CONFIDENCE WITH THE UNDERSTANDING IT SHALL BE RETURNED ON DEMAND.



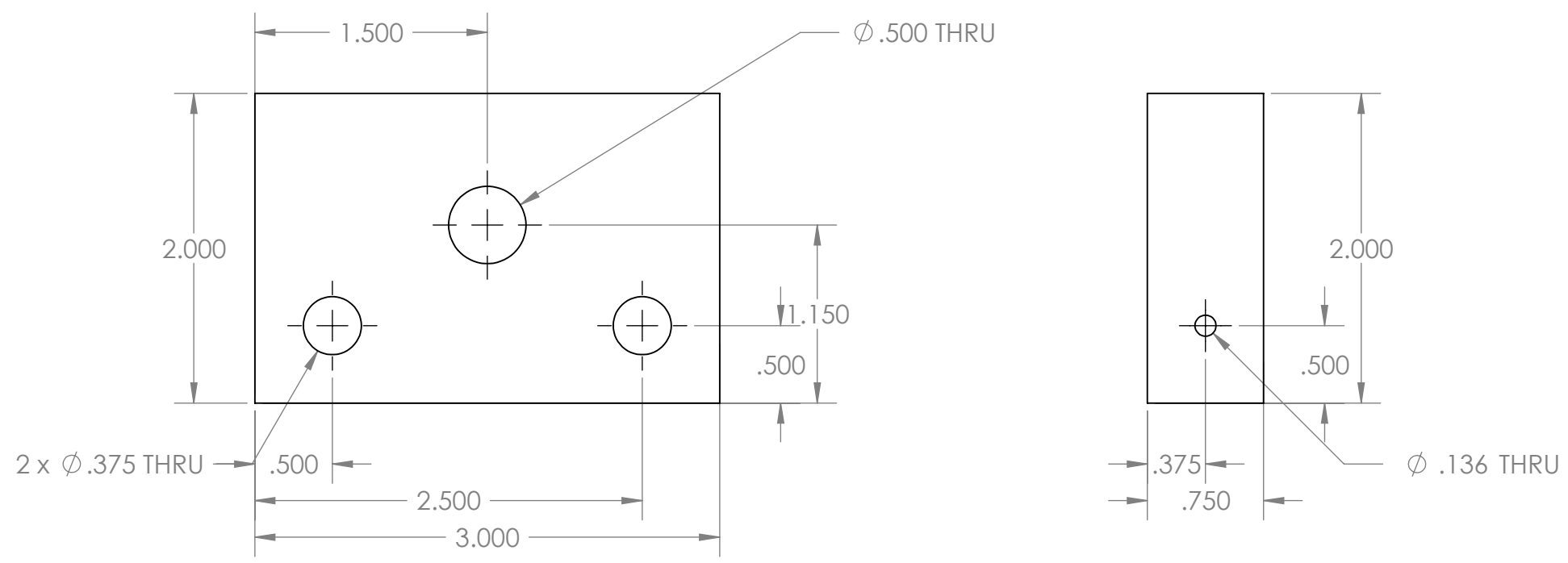
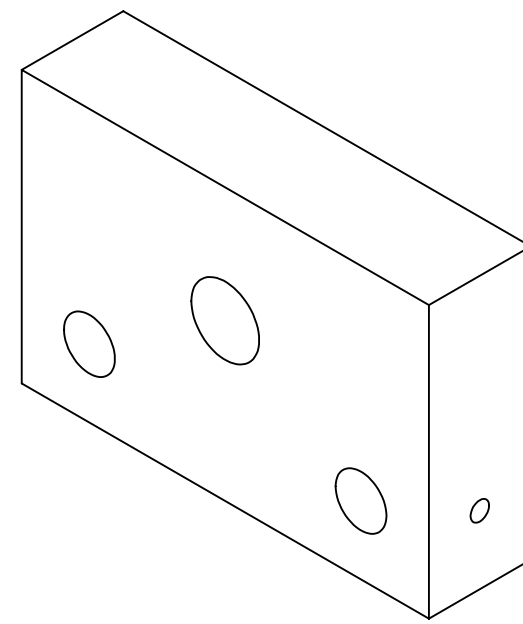
1	End Block
3	Lead Screw
4	Motor End Block
5	Stage Platform
8	Linear Bearing
9	Stepper Motor
10	Coupler
11	Linear Guide Rail
12	Lin. Motor Base
13	Lin. Motor Face
14	Stage Block 1
15	Homing Sensor Slot
16	Spindle Block
17	Arbor
18	Threaded Collar
19	Chuck
21	Coupler
22	Collar
23	Rot. Motor Base
24	Rot. Motor Face
25	Angular Bearing
26	Stage Block 2

REV LTR	D.C.R. NO.	DATE	DR	CK	APP
DESCRIPTION:					DRAWING NO.
UNLESS OTHERWISE SPECIFIED:					
DIMENSIONS ARE IN INCHES					
REMOVE SHARP EDGES: .005 - .015					
FILLETS: .015		TOTAL RUNOUT: .005 FIM			
TOLERANCES:		SURFACE FINISH:			
.XX = ±.01		✓ OUTSIDE      ✓ INSIDE			
.XXX = ±.005					
.XXX = ±.0005					
ANGULAR: ±0°30'					
DRAWN:			CHECKED:		
DATE:			APPROVED:		
NEXT OPERATION/ASSEMBLY:			SCALE:		
SPEC.	MATERIAL:				
M-					
SPEC.	HEAT TREAT:				
H-					
SPEC.	FINISH:				
C-					
<b>CHERRY</b> ® AEROSPACE <small>SPS Fastener Division, a PCC Company</small>					
TITLE: Linear Stage Assembly					
DRAWING NO.					REV



WARNING: THIS DRAWING AND DATA EMBODY PROPRIETARY INFORMATION WHICH IS THE CONFIDENTIAL PROPERTY OF CHERRY AEROSPACE AND SHALL NOT BE COPIED NOR REPRODUCED. THIS DRAWING AND DATA SHALL NOT BE DISCLOSED TO NON-CHERRY PERSONNEL OR USED IN WHOLE OR IN PART FOR ANY PURPOSE WITHOUT THE EXPRESS WRITTEN PERMISSION OF CHERRY AEROSPACE. THIS DRAWING IS LOANED IN CONFIDENCE WITH THE UNDERSTANDING IT SHALL BE RETURNED ON DEMAND.

4



REV LTR	D.C.R. NO.	DATE	DR	CK	APP

DESCRIPTION:

DRAWING NO.

UNLESS OTHERWISE SPECIFIED:  
 DIMENSIONS ARE IN INCHES  
 REMOVE SHARP EDGES: .005 - .015  
 FILLETS: .015  
 TOLERANCES:  
 .XX = ±.01  
 .XXX = ±.005  
 .XXXX = ±.0005  
 ANGULAR: ±0°30'

TOTAL RUNOUT: .005 FIM  
 SURFACE FINISH:  
 OUTSIDE ✓  
 INSIDE ✓

DRAWN: \_\_\_\_\_ CHECKED: \_\_\_\_\_

DATE: \_\_\_\_\_ APPROVED: \_\_\_\_\_

NEXT OPERATION/ASSEMBLY: \_\_\_\_\_ SCALE: \_\_\_\_\_

SPEC. MATERIAL: Aluminum

SPEC. HEAT TREAT:

SPEC. FINISH:

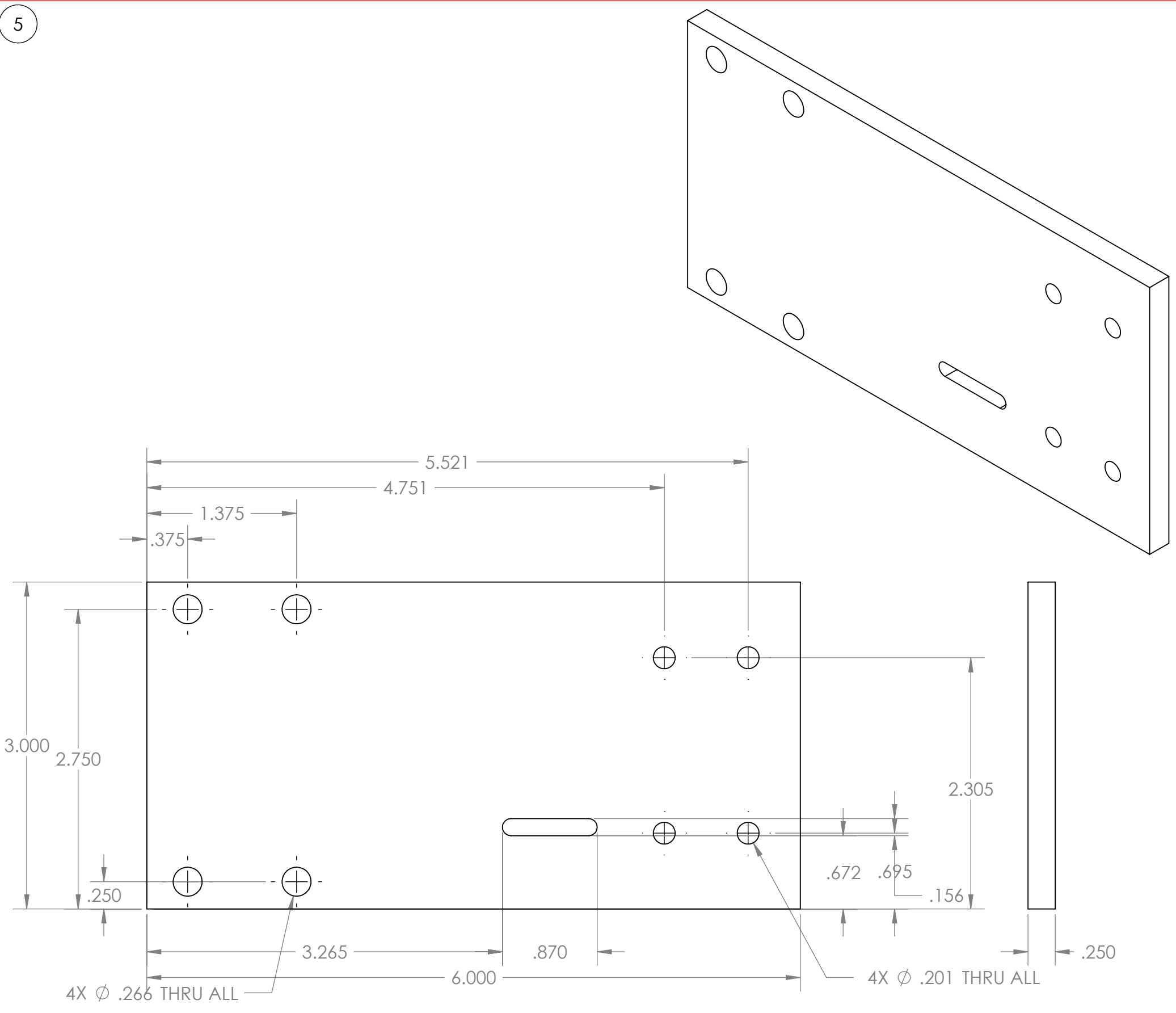
**CHERRY<sup>®</sup> AEROSPACE**  
SPS Fastener Division, a PCC Company

TITLE: Motor End Block

DRAWING NO.002 REV

WARNING: THIS DRAWING AND DATA EMBODY PROPRIETARY INFORMATION WHICH IS THE CONFIDENTIAL PROPERTY OF CHERRY AEROSPACE AND SHALL NOT BE COPIED NOR REPRODUCED. THIS DRAWING AND DATA SHALL NOT BE DISCLOSED TO NON-CHERRY PERSONNEL OR USED IN WHOLE OR IN PART FOR ANY PURPOSE WITHOUT THE EXPRESS WRITTEN PERMISSION OF CHERRY AEROSPACE. THIS DRAWING IS LOANED IN CONFIDENCE WITH THE UNDERSTANDING IT SHALL BE RETURNED ON DEMAND.

5



REV LTR	D.C.R. NO.	DATE	DR	CK	APP

DESCRIPTION:

DRAWING NO.

UNLESS OTHERWISE SPECIFIED:  
 DIMENSIONS ARE IN INCHES  
 REMOVE SHARP EDGES: .005 - .015  
 FILLETS: .015  
 TOLERANCES:  
 .XX = ±.01  
 .XXX = ±.005  
 .XXXX = ±.0005  
 ANGULAR: ±0°30'

TOTAL RUNOUT: .005 FIM  
 SURFACE FINISH:  
 OUTSIDE ✓  
 INSIDE ✓

DRAWN: \_\_\_\_\_ CHECKED: \_\_\_\_\_

DATE: \_\_\_\_\_ APPROVED: \_\_\_\_\_

NEXT OPERATION/ASSEMBLY: \_\_\_\_\_ SCALE: \_\_\_\_\_

SPEC. MATERIAL: Aluminum  
 M- \_\_\_\_\_

SPEC. HEAT TREAT:  
 H- \_\_\_\_\_

SPEC. FINISH:  
 C- \_\_\_\_\_

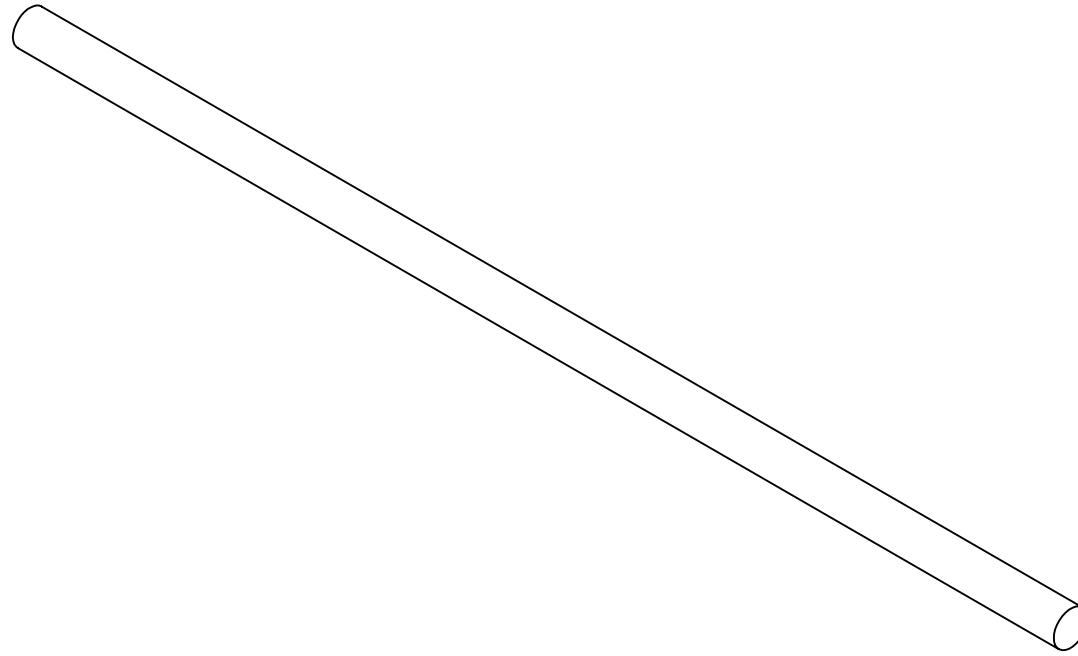
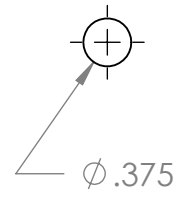
**CHERRY**® AEROSPACE  
 SPS Fastener Division, a PCC Company

TITLE: Stage Platform

DRAWING NO.003 REV

WARNING: THIS DRAWING AND DATA EMBODY PROPRIETARY INFORMATION WHICH IS THE CONFIDENTIAL PROPERTY OF CHERRY AEROSPACE AND SHALL NOT BE COPIED NOR REPRODUCED. THIS DRAWING AND DATA SHALL NOT BE DISCLOSED TO NON-CHERRY PERSONNEL OR USED IN WHOLE OR IN PART FOR ANY PURPOSE WITHOUT THE EXPRESS WRITTEN PERMISSION OF CHERRY AEROSPACE. THIS DRAWING IS LOANED IN CONFIDENCE WITH THE UNDERSTANDING IT SHALL BE RETURNED ON DEMAND.

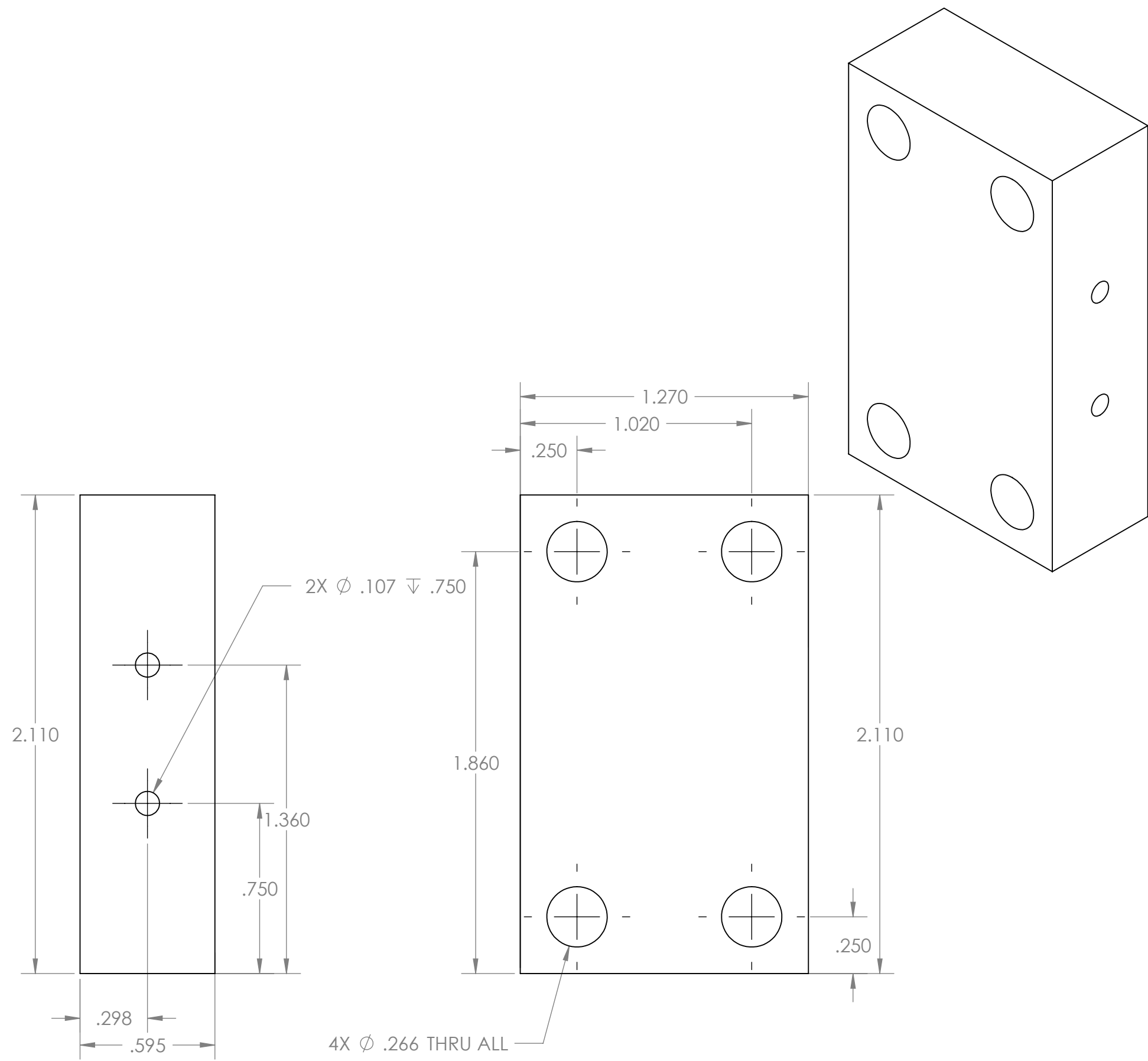
11



REV LTR	D.C.R. NO.	DATE	DR	CK	APP
DESCRIPTION:					DRAWING NO.
UNLESS OTHERWISE SPECIFIED:					
DIMENSIONS ARE IN INCHES					
REMOVE SHARP EDGES: .005 - .015					
FILLETS: .015		TOTAL RUNOUT: .005 FIM			
TOLERANCES:		SURFACE FINISH:			
.XX = ±.01		✓		✓	
.XXX = ±.005		OUTSIDE		INSIDE	
.XXX = ±.0005					
ANGULAR: ±0°30'					
DRAWN:			CHECKED:		
DATE:			APPROVED:		
NEXT OPERATION/ASSEMBLY:			SCALE:		
SPEC. M-	MATERIAL: Hardened Steel				
SPEC. H-	HEAT TREAT:				
SPEC. C-	FINISH:				
<b>CHERRY</b> ® AEROSPACE <small>SPS Fastener Division, a PCC Company</small>					
TITLE: Linear Guide Rails					
DRAWING NO.004					REV

WARNING: THIS DRAWING AND DATA EMBODY PROPRIETARY INFORMATION WHICH IS THE CONFIDENTIAL PROPERTY OF CHERRY AEROSPACE AND SHALL NOT BE COPIED NOR REPRODUCED. THIS DRAWING AND DATA SHALL NOT BE DISCLOSED TO NON-CHERRY PERSONNEL OR USED IN WHOLE OR IN PART FOR ANY PURPOSE WITHOUT THE EXPRESS WRITTEN PERMISSION OF CHERRY AEROSPACE. THIS DRAWING IS LOANED IN CONFIDENCE WITH THE UNDERSTANDING IT SHALL BE RETURNED ON DEMAND.

12



REV LTR	D.C.R. NO.	DATE	DR	CK	APP

DESCRIPTION:

DRAWING NO.

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES

REMOVE SHARP EDGES: .005 - .015

FILLETS: .015

TOLERANCES:

.XX = ±.01

.XXX = ±.005

.XXXX = ±.0005

ANGULAR: ±0°30'

TOTAL RUNOUT: .005 FIM

SURFACE FINISH:

OUTSIDE ✓

INSIDE ✓

DRAWN: \_\_\_\_\_ CHECKED: \_\_\_\_\_

DATE: \_\_\_\_\_ APPROVED: \_\_\_\_\_

NEXT OPERATION/ASSEMBLY: \_\_\_\_\_ SCALE: \_\_\_\_\_

SPEC. MATERIAL: Aluminum

SPEC. HEAT TREAT:

SPEC. FINISH:

**CHERRY**® AEROSPACE  
SPS Fastener Division, a PCC Company

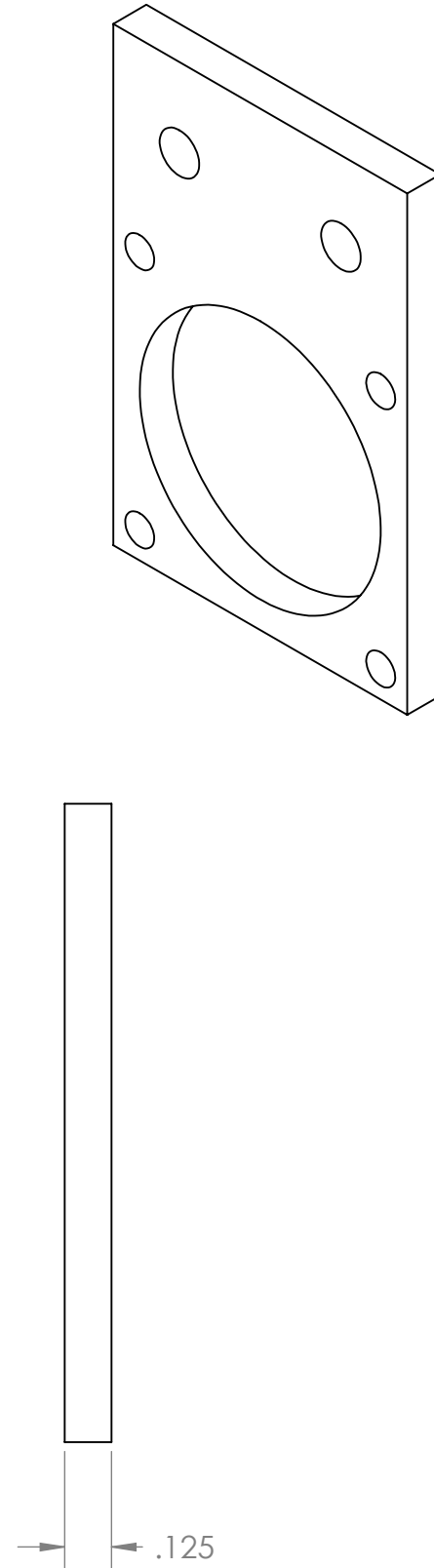
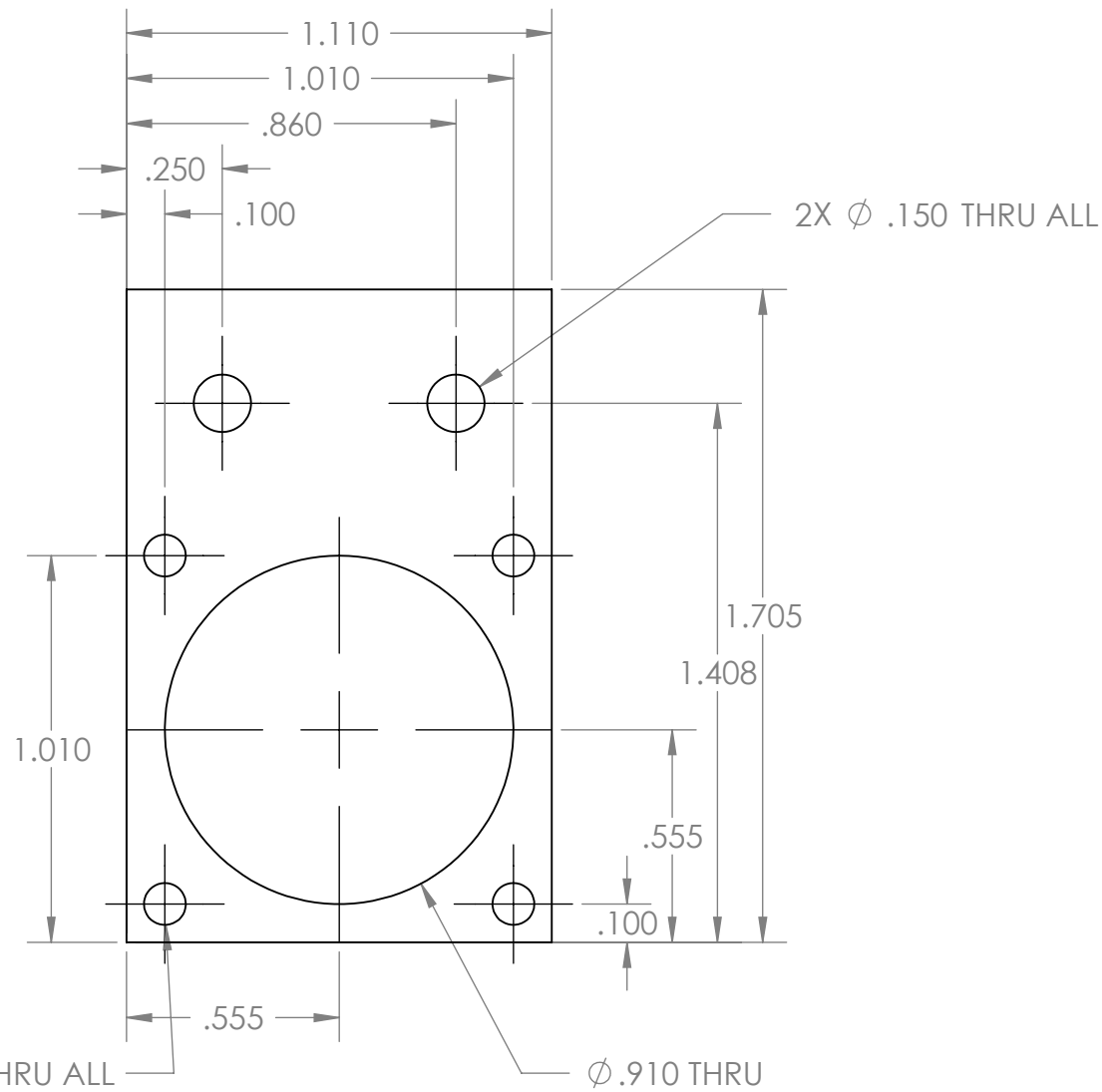
TITLE: Linear Motor Base

DRAWING NO.005

REV

WARNING: THIS DRAWING AND DATA EMBODY PROPRIETARY INFORMATION WHICH IS THE CONFIDENTIAL PROPERTY OF CHERRY AEROSPACE AND SHALL NOT BE COPIED NOR REPRODUCED. THIS DRAWING AND DATA SHALL NOT BE DISCLOSED TO NON-CHERRY PERSONNEL OR USED IN WHOLE OR IN PART FOR ANY PURPOSE WITHOUT THE EXPRESS WRITTEN PERMISSION OF CHERRY AEROSPACE. THIS DRAWING IS LOANED IN CONFIDENCE WITH THE UNDERSTANDING IT SHALL BE RETURNED ON DEMAND.

13



REV LTR	D.C.R. NO.	DATE	DR	CK	APP

DESCRIPTION:

DRAWING NO.

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES  
REMOVE SHARP EDGES: .005 - .015

FILLETS: .015	TOTAL RUNOUT: .005 FIM
TOLERANCES:	SURFACE FINISH:
.XX = ±.01	✓ OUTSIDE
.XXX = ±.005	✓ INSIDE
.XXX = ±.0005	
ANGULAR: ±0°30'	

DRAWN: \_\_\_\_\_ CHECKED: \_\_\_\_\_

DATE: \_\_\_\_\_ APPROVED: \_\_\_\_\_

NEXT OPERATION/ASSEMBLY: \_\_\_\_\_ SCALE: \_\_\_\_\_

SPEC. MATERIAL: Aluminum

M- HEAT TREAT:

H- FINISH:

C- \_\_\_\_\_

**CHERRY<sup>®</sup> AEROSPACE**  
*SPS Fastener Division, a PCC Company*

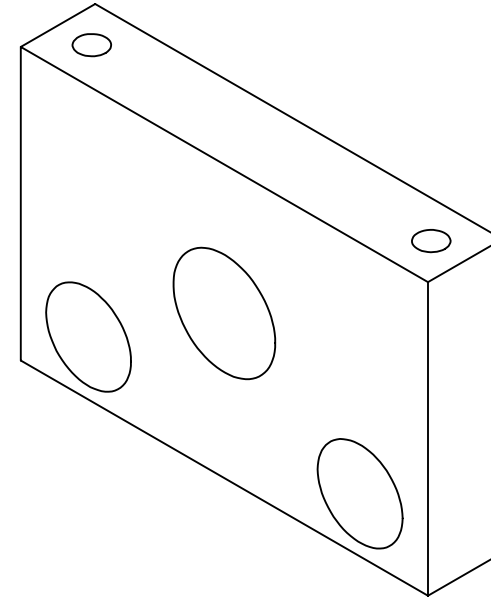
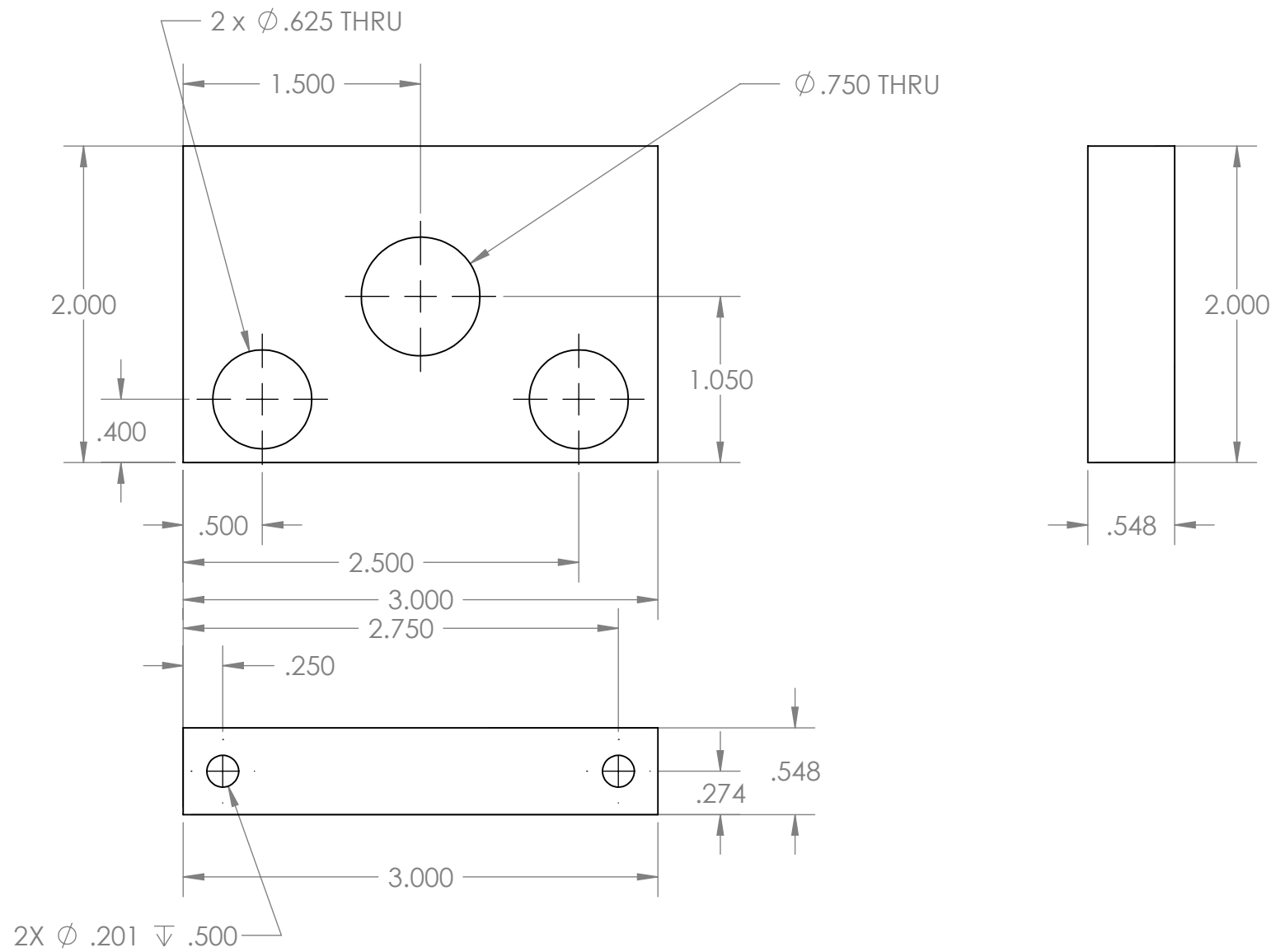
TITLE: Linear Motor Face Mount

DRAWING NO.006 REV



WARNING: THIS DRAWING AND DATA EMBODY PROPRIETARY INFORMATION WHICH IS THE CONFIDENTIAL PROPERTY OF CHERRY AEROSPACE AND SHALL NOT BE COPIED NOR REPRODUCED. THIS DRAWING AND DATA SHALL NOT BE DISCLOSED TO NON-CHERRY PERSONNEL OR USED IN WHOLE OR IN PART FOR ANY PURPOSE WITHOUT THE EXPRESS WRITTEN PERMISSION OF CHERRY AEROSPACE. THIS DRAWING IS LOANED IN CONFIDENCE WITH THE UNDERSTANDING IT SHALL BE RETURNED ON DEMAND.

14



REV LTR	D.C.R. NO.	DATE	DR	CK	APP

DESCRIPTION:

DRAWING NO.

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES

REMOVE SHARP EDGES: .005 - .015

FILLETS: .015

TOLERANCES:

.XX =  $\pm$ .01

.XXX =  $\pm$ .005

.XXXX =  $\pm$ .0005

ANGULAR:  $\pm$ 0°30'

TOTAL RUNOUT: .005 FIM

SURFACE FINISH:

OUTSIDE

INSIDE

DRAWN: \_\_\_\_\_ CHECKED: \_\_\_\_\_

DATE: \_\_\_\_\_ APPROVED: \_\_\_\_\_

NEXT OPERATION/ASSEMBLY: \_\_\_\_\_ SCALE: \_\_\_\_\_

SPEC. MATERIAL: Aluminum

SPEC. HEAT TREAT:

SPEC. FINISH:

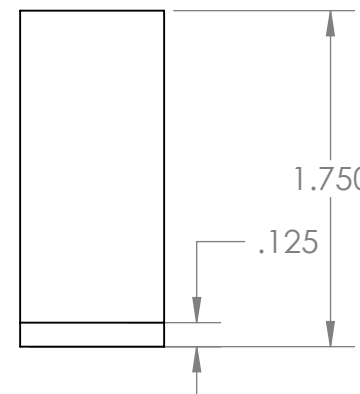
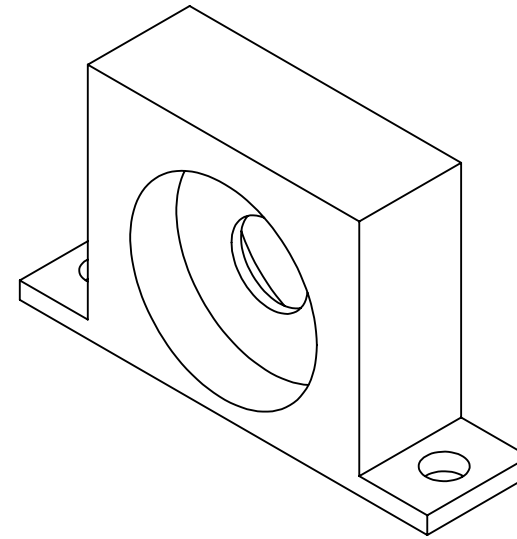
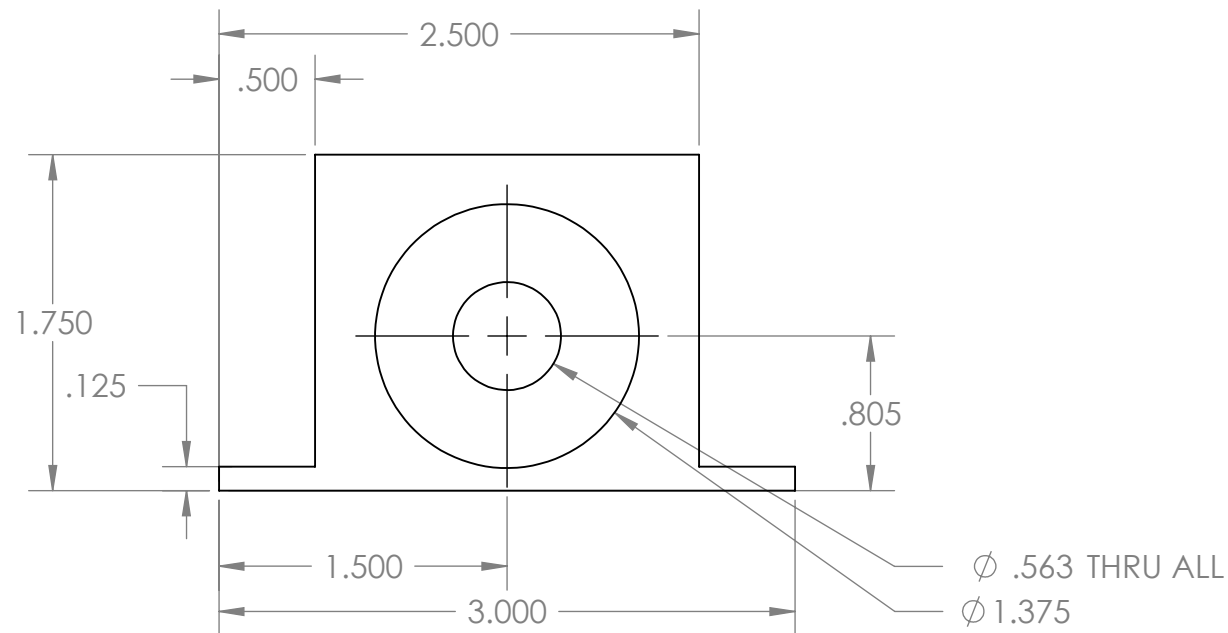
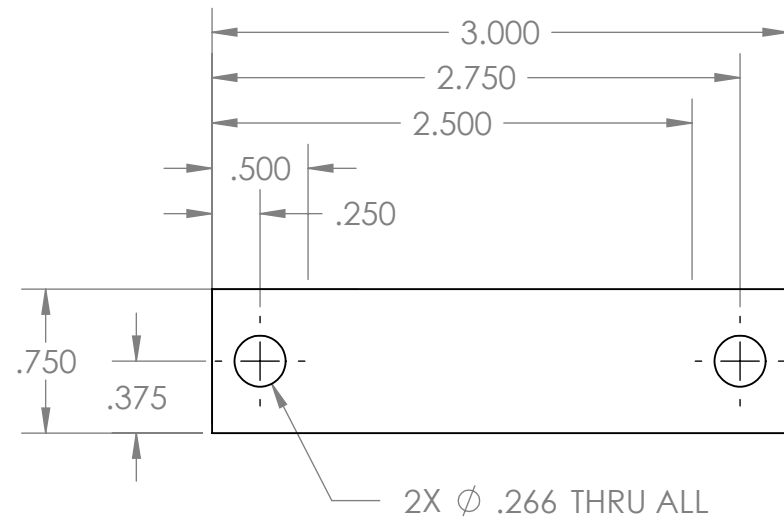
**CHERRY**® AEROSPACE  
SPS Fastener Division, a PCC Company

TITLE: Stage Block 1

DRAWING NO.007 REV

WARNING: THIS DRAWING AND DATA EMBODY PROPRIETARY INFORMATION WHICH IS THE CONFIDENTIAL PROPERTY OF CHERRY AEROSPACE AND SHALL NOT BE COPIED NOR REPRODUCED. THIS DRAWING AND DATA SHALL NOT BE DISCLOSED TO NON-CHERRY PERSONNEL OR USED IN WHOLE OR IN PART FOR ANY PURPOSE WITHOUT THE EXPRESS WRITTEN PERMISSION OF CHERRY AEROSPACE. THIS DRAWING IS LOANED IN CONFIDENCE WITH THE UNDERSTANDING IT SHALL BE RETURNED ON DEMAND.

16



REV LTR	D.C.R. NO.	DATE	DR	CK	APP

DESCRIPTION:

DRAWING NO.

UNLESS OTHERWISE SPECIFIED:  
 DIMENSIONS ARE IN INCHES  
 REMOVE SHARP EDGES: .005 - .015  
 FILLETS: .015  
 TOLERANCES:  
 .XX = ±.01  
 .XXX = ±.005  
 .XXX = ±.0005  
 ANGULAR: ±0°30'

TOTAL RUNOUT: .005 FIM  
 SURFACE FINISH:  
 OUTSIDE ✓  
 INSIDE ✓

DRAWN: \_\_\_\_\_ CHECKED: \_\_\_\_\_

DATE: \_\_\_\_\_ APPROVED: \_\_\_\_\_

NEXT OPERATION/ASSEMBLY: \_\_\_\_\_ SCALE: \_\_\_\_\_

SPEC. MATERIAL: Aluminum

SPEC. HEAT TREAT:

SPEC. FINISH:

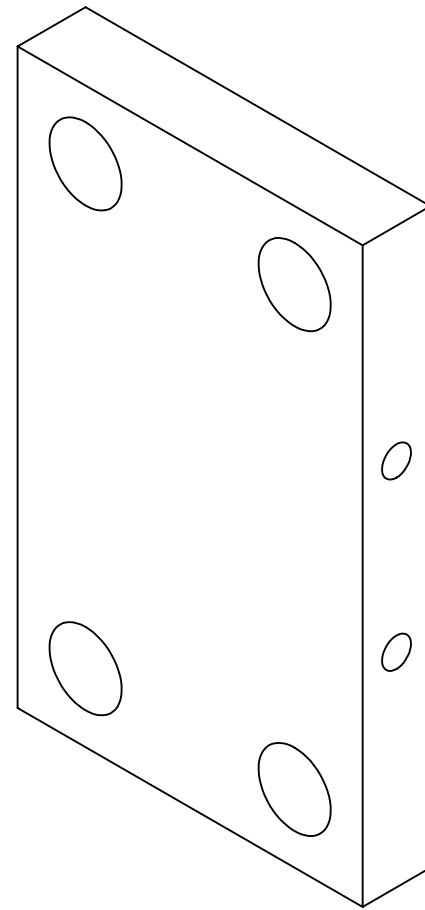
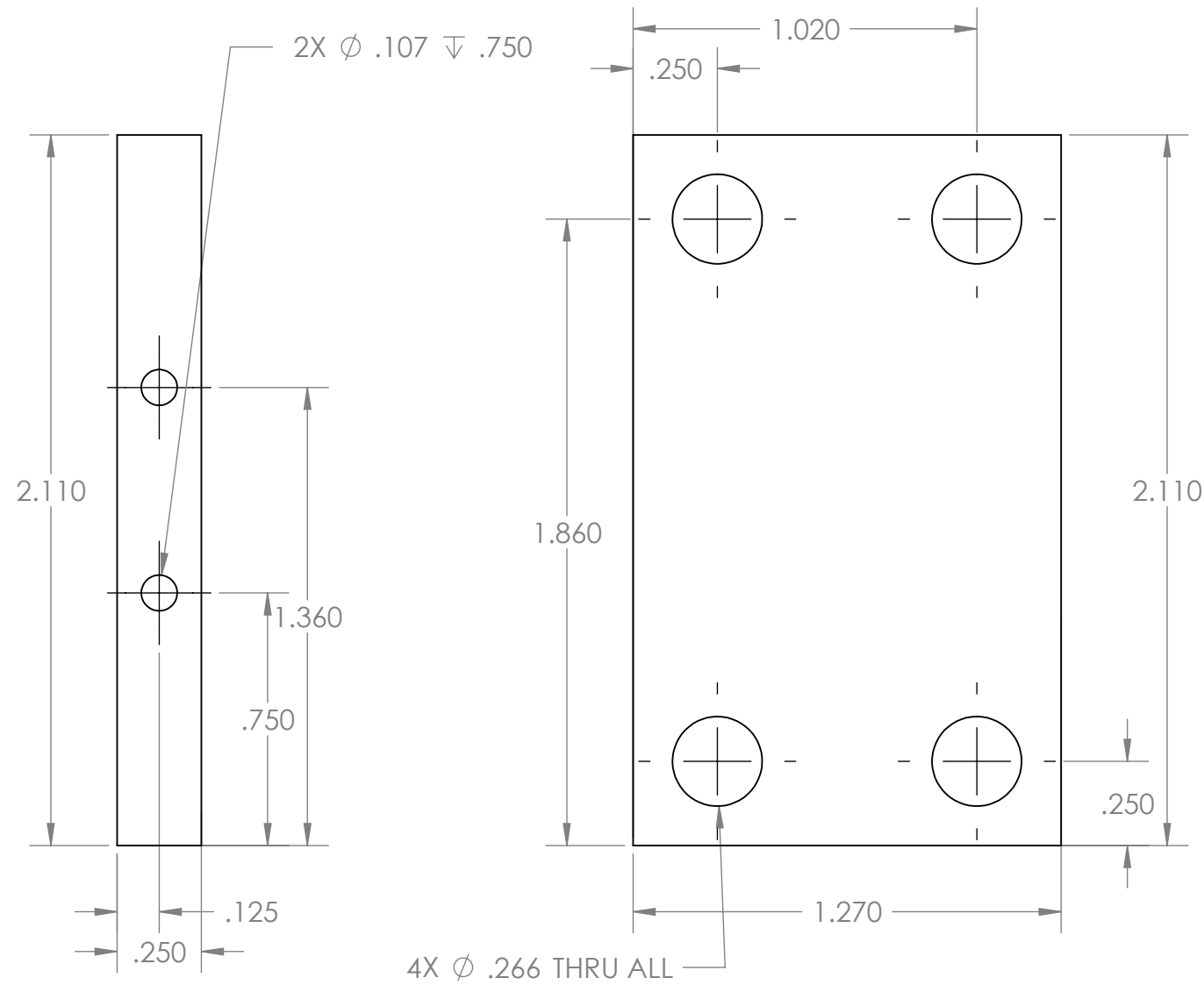
**CHERRY**® AEROSPACE  
 SPS Fastener Division, a PCC Company

TITLE: Spindle Block

DRAWING NO.008 REV

WARNING: THIS DRAWING AND DATA EMBODY PROPRIETARY INFORMATION WHICH IS THE CONFIDENTIAL PROPERTY OF CHERRY AEROSPACE AND SHALL NOT BE COPIED NOR REPRODUCED. THIS DRAWING AND DATA SHALL NOT BE DISCLOSED TO NON-CHERRY PERSONNEL OR USED IN WHOLE OR IN PART FOR ANY PURPOSE WITHOUT THE EXPRESS WRITTEN PERMISSION OF CHERRY AEROSPACE. THIS DRAWING IS LOANED IN CONFIDENCE WITH THE UNDERSTANDING IT SHALL BE RETURNED ON DEMAND.

23



REV LTR	D.C.R. NO.	DATE	DR	CK	APP

DESCRIPTION:

DRAWING NO.

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES  
REMOVE SHARP EDGES: .005 - .015

FILLETS: .015  
TOLERANCES:  
.XX = ±.01  
.XXX = ±.005  
.XXXX = ±.0005  
ANGULAR: ±0°30'

TOTAL RUNOUT: .005 FIM  
SURFACE FINISH:

OUTSIDE       INSIDE

DRAWN: \_\_\_\_\_ CHECKED: \_\_\_\_\_

DATE: \_\_\_\_\_ APPROVED: \_\_\_\_\_

NEXT OPERATION/ASSEMBLY: \_\_\_\_\_ SCALE: \_\_\_\_\_

SPEC. MATERIAL: Aluminum

SPEC. HEAT TREAT:

SPEC. FINISH:

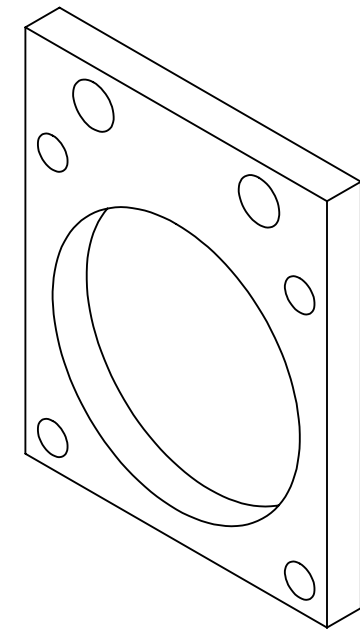
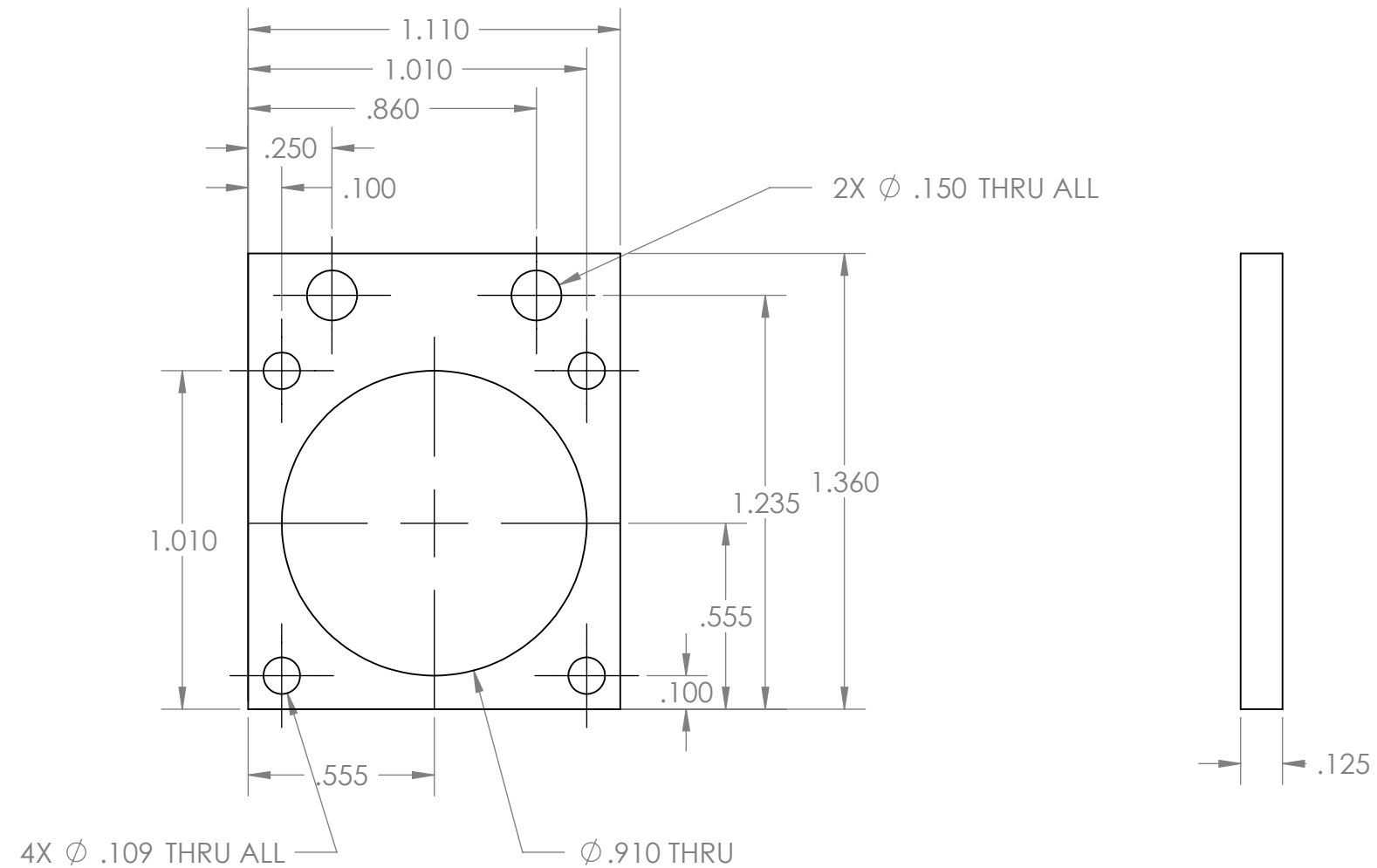
**CHERRY**® AEROSPACE  
SPS Fastener Division, a PCC Company

TITLE: Rotational Motor Base

DRAWING NO.009      REV

WARNING: THIS DRAWING AND DATA EMBODY PROPRIETARY INFORMATION WHICH IS THE CONFIDENTIAL PROPERTY OF CHERRY AEROSPACE AND SHALL NOT BE COPIED NOR REPRODUCED. THIS DRAWING AND DATA SHALL NOT BE DISCLOSED TO NON-CHERRY PERSONNEL OR USED IN WHOLE OR IN PART FOR ANY PURPOSE WITHOUT THE EXPRESS WRITTEN PERMISSION OF CHERRY AEROSPACE. THIS DRAWING IS LOANED IN CONFIDENCE WITH THE UNDERSTANDING IT SHALL BE RETURNED ON DEMAND.

24



REV LTR	D.C.R. NO.	DATE	DR	CK	APP

DESCRIPTION:

DRAWING NO.

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES

REMOVE SHARP EDGES: .005 - .015

FILLETS: .015  
TOLERANCES:  
.XX = ±.01  
.XXX = ±.005  
.XXXX = ±.0005  
ANGULAR: ±0°30'

TOTAL RUNOUT: .005 FIM  
SURFACE FINISH:  
OUTSIDE ✓  
INSIDE ✓

DRAWN: \_\_\_\_\_ CHECKED: \_\_\_\_\_

DATE: \_\_\_\_\_ APPROVED: \_\_\_\_\_

NEXT OPERATION/ASSEMBLY: \_\_\_\_\_ SCALE: \_\_\_\_\_

SPEC. MATERIAL: Aluminum

SPEC. HEAT TREAT:

SPEC. FINISH:

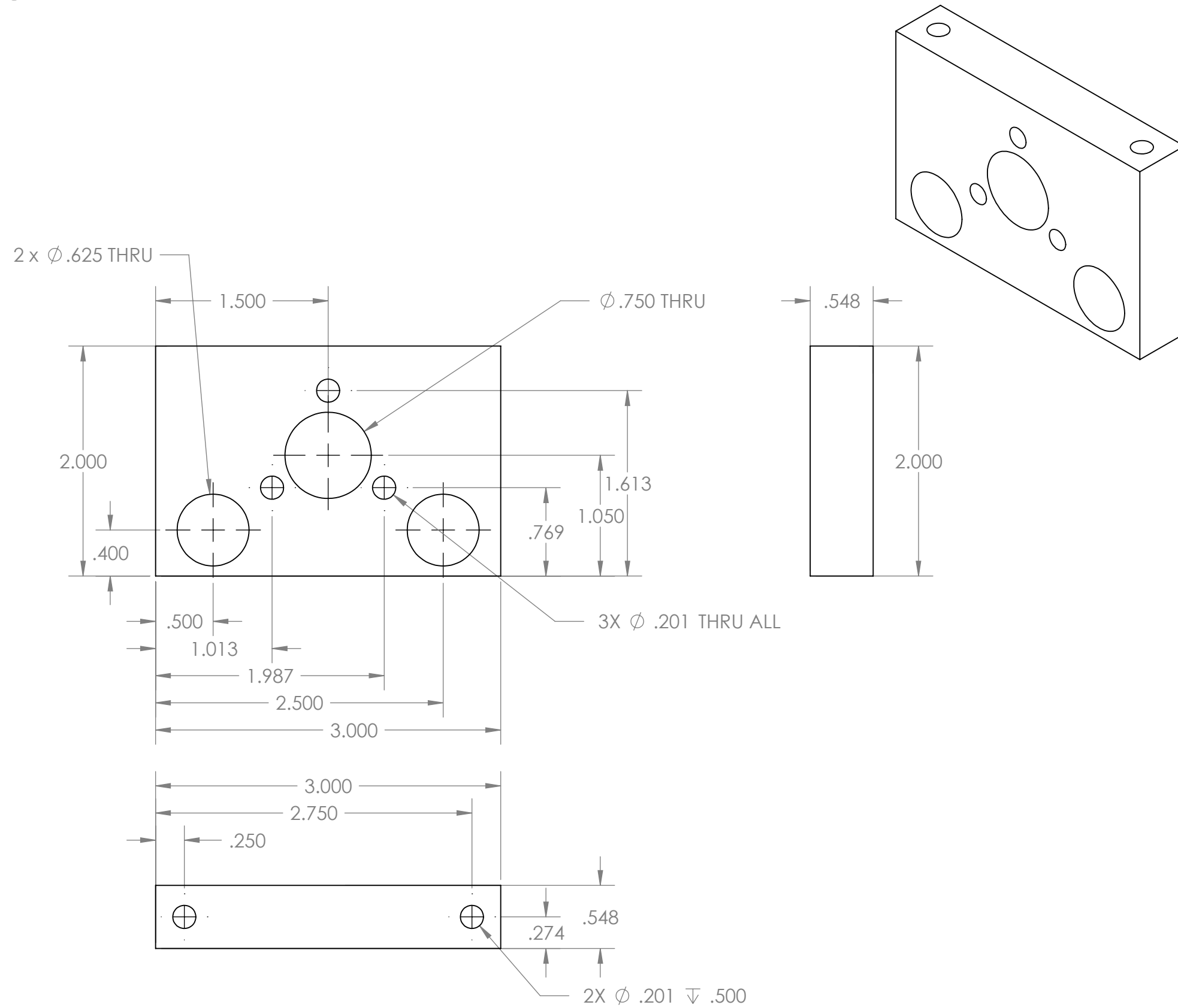
**CHERRY**® AEROSPACE  
SPS Fastener Division, a PCC Company

TITLE: Rotational Motor Face Mount

DRAWING NO.010 REV

WARNING: THIS DRAWING AND DATA EMBODY PROPRIETARY INFORMATION WHICH IS THE CONFIDENTIAL PROPERTY OF CHERRY AEROSPACE AND SHALL NOT BE COPIED NOR REPRODUCED. THIS DRAWING AND DATA SHALL NOT BE DISCLOSED TO NON-CHERRY PERSONNEL OR USED IN WHOLE OR IN PART FOR ANY PURPOSE WITHOUT THE EXPRESS WRITTEN PERMISSION OF CHERRY AEROSPACE. THIS DRAWING IS LOANED IN CONFIDENCE WITH THE UNDERSTANDING IT SHALL BE RETURNED ON DEMAND.

26



REV LTR	D.C.R. NO.	DATE	DR	CK	APP

DESCRIPTION:

DRAWING NO.

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES

REMOVE SHARP EDGES: .005 - .015

FILLETS: .015

TOLERANCES:

.XX =  $\pm$ .01

.XXX =  $\pm$ .005

.XXXX =  $\pm$ .0005

ANGULAR:  $\pm$ 0°30'

TOTAL RUNOUT: .005 FIM

SURFACE FINISH:

OUTSIDE

INSIDE

DRAWN: \_\_\_\_\_ CHECKED: \_\_\_\_\_

DATE: \_\_\_\_\_ APPROVED: \_\_\_\_\_

NEXT OPERATION/ASSEMBLY: \_\_\_\_\_ SCALE: \_\_\_\_\_

SPEC. MATERIAL: Aluminum

SPEC. HEAT TREAT:

SPEC. FINISH:

**CHERRY**® AEROSPACE  
SPS Fastener Division, a PCC Company

TITLE: Stage Block 2

DRAWING NO.011 REV

