

UK Mail Screening Test Piece (MSTP) – Engineering Drawings

Introduction

The UK Mail Screening Test Piece (MSTP) has been developed by the Home Office Centre for Applied Science and Technology (CAST) in conjunction with the Centre for the Protection of National Infrastructure (CPNI). The MSTP is designed as a means of evaluating the performance of x-ray systems being used for screening of mail items to counter threats or contraband items entering an establishment.

Engineering Drawings

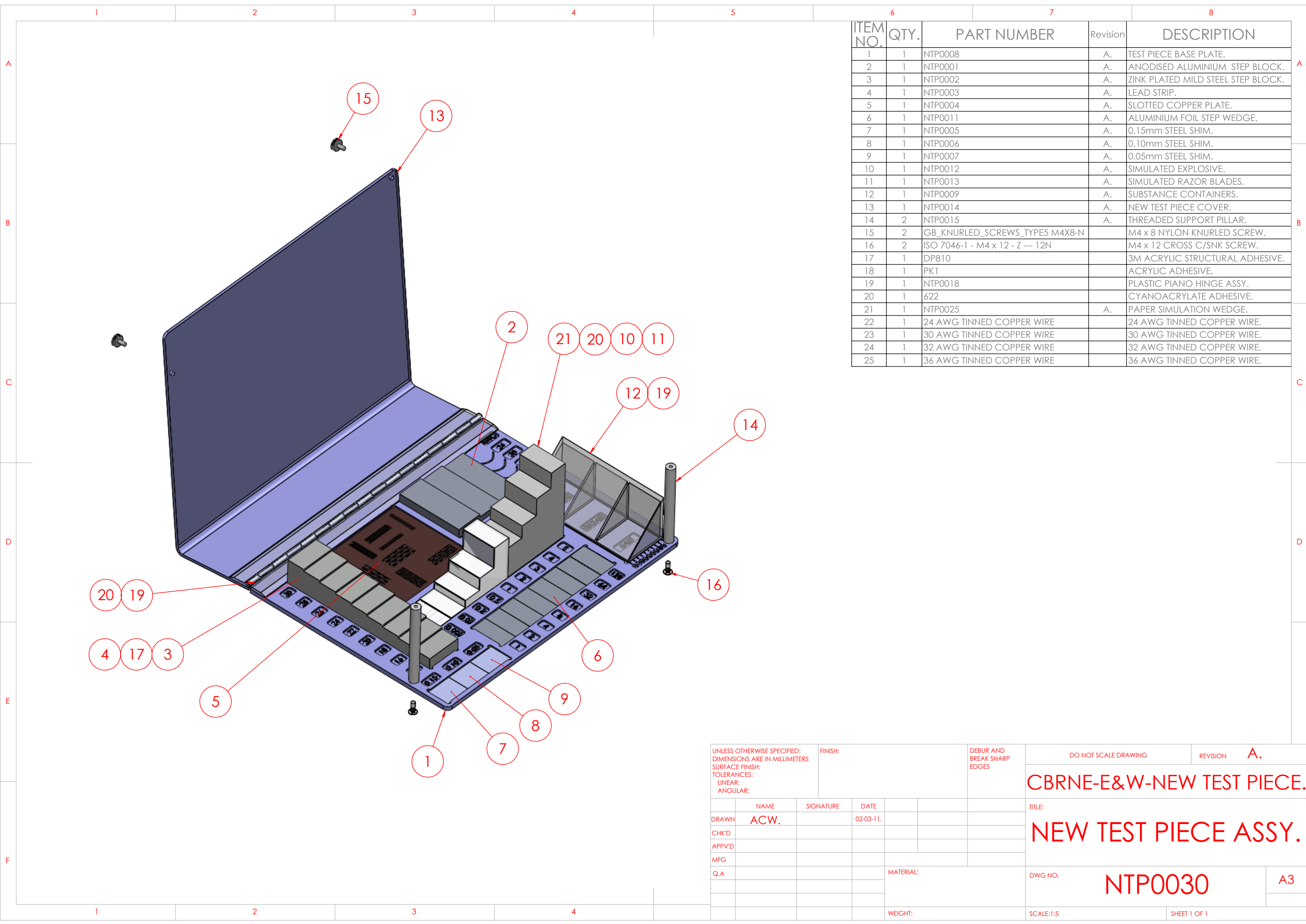
The PDF engineering drawings provided here have been derived from the Solid Works™ package used by CAST for the design and manufacture of the UK Mail Screening Test Piece.

Further Information

Further information on the UK Mail Screening Test Piece can be obtained from CPNI. Potential users are advised to review the CPNI document “UK Mail Screening Test Piece (MSTP) v1.0 – A Guide” available from CPNI.

Advice and guidance as to the procurement of a fully assembled MSTP can be obtained from CPNI

CAST
21/07/2016 W Stratton



ITEM NO.	QTY.	PART NUMBER	Revision	DESCRIPTION
1	1	NTP0008	A.	TEST PIECE BASE PLATE.
2	1	NTP0001	A.	ANODISED ALUMINIUM STEP BLOCK.
3	1	NTP0002	A.	ZINK PLATED MILD STEEL STEP BLOCK.
4	1	NTP0003	A.	LEAD STRIP.
5	1	NTP0004	A.	SLOTTED COPPER PLATE.
6	1	NTP0011	A.	ALUMINIUM FOIL STEP WEDGE.
7	1	NTP0005	A.	0.15mm STEEL SHIM.
8	1	NTP0006	A.	0.10mm STEEL SHIM.
9	1	NTP0007	A.	0.05mm STEEL SHIM.
10	1	NTP0012	A.	SIMULATED EXPLOSIVE.
11	1	NTP0013	A.	SIMULATED RAZOR BLADES.
12	1	NTP0009	A.	SUBSTANCE CONTAINERS.
13	1	NTP0014	A.	NEW TEST PIECE COVER.
14	2	NTP0015	A.	THREADED SUPPORT PILLAR.
15	2	GB_KNURLED_SCREWS_TYPE5 M4X8-N		M4 x 8 NYLON KNURLED SCREW.
16	2	ISO 7046-1 - M4 x 12 - Z --- 12N		M4 x 12 CROSS C/SNK SCREW.
17	1	DP810		3M ACRYLIC STRUCTURAL ADHESIVE.
18	1	PK1		ACRYLIC ADHESIVE.
19	1	NTP0018		PLASTIC PIANO HINGE ASSY.
20	1	622		CYANOACRYLATE ADHESIVE.
21	1	NTP0025	A.	PAPER SIMULATION WEDGE.
22	1	24 AWG TINNED COPPER WIRE		24 AWG TINNED COPPER WIRE.
23	1	30 AWG TINNED COPPER WIRE		30 AWG TINNED COPPER WIRE.
24	1	32 AWG TINNED COPPER WIRE		32 AWG TINNED COPPER WIRE.
25	1	36 AWG TINNED COPPER WIRE		36 AWG TINNED COPPER WIRE.

UNLESS OTHERWISE SPECIFIED:
 DIMENSIONS ARE IN MILLIMETERS
 SURFACE FINISH:
 TOLERANCES:
 LINEAR:
 ANGULAR:

FINISH:

DEBUR AND BREAK SHARP EDGES

DO NOT SCALE DRAWING

REVISION **A.**

CBRNE-E&W-NEW TEST PIECE.

TITLE:
NEW TEST PIECE ASSY.

DWG NO. **NTP0030**

A3

SCALE:1:5

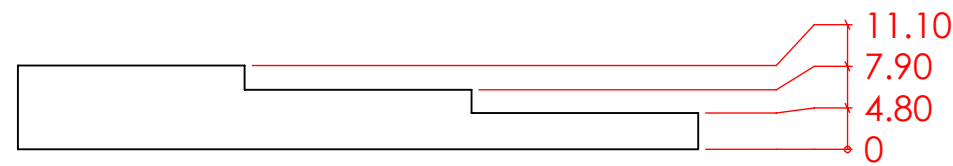
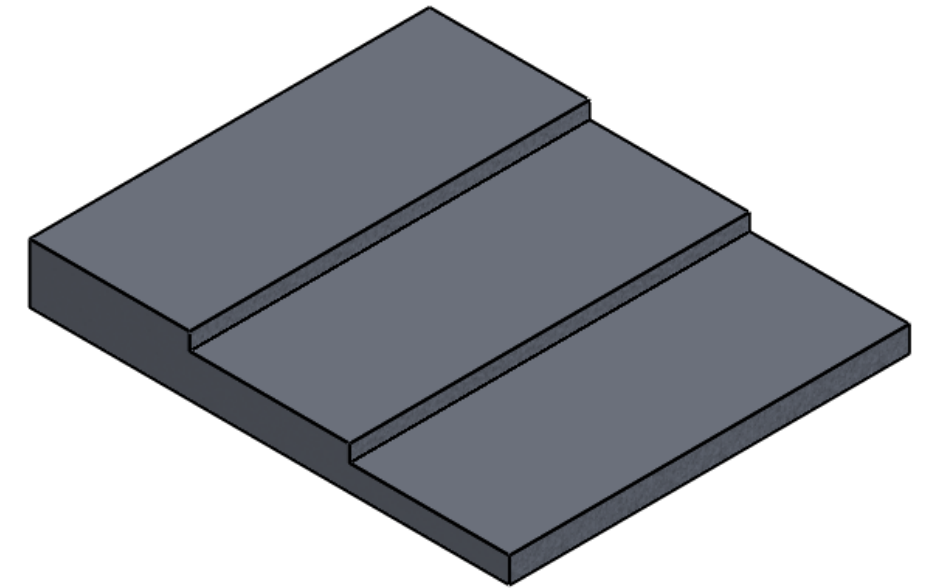
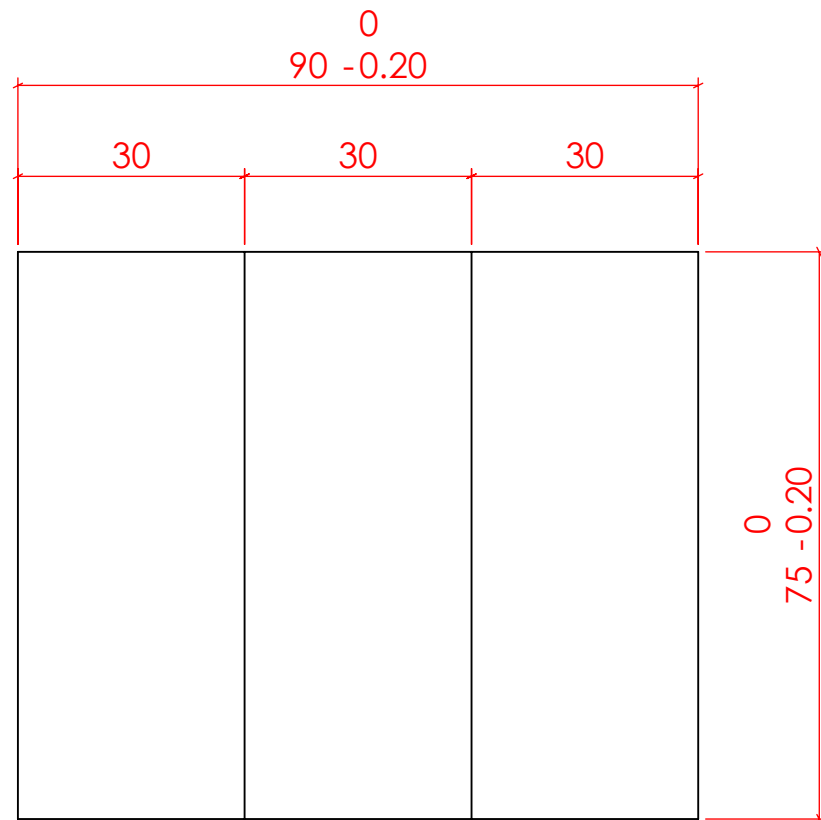
SHEET 1 OF 1

NAME	SIGNATURE	DATE
DRAWN ACW.		02-03-11.
CHK'D		
APPV'D		
MFG		
Q.A		

MATERIAL:

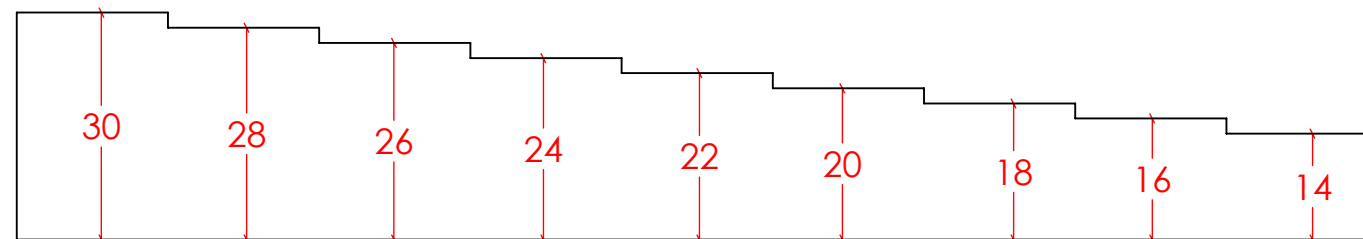
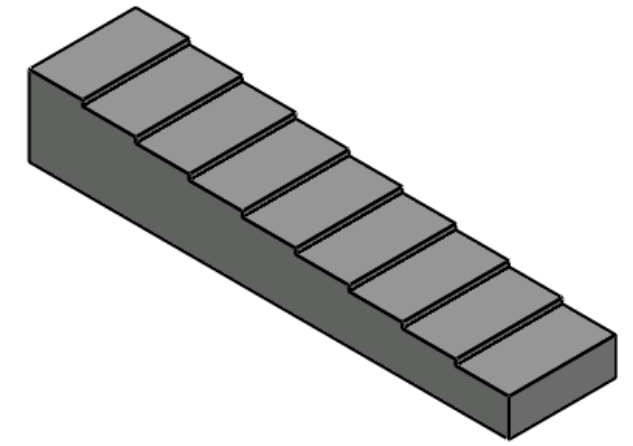
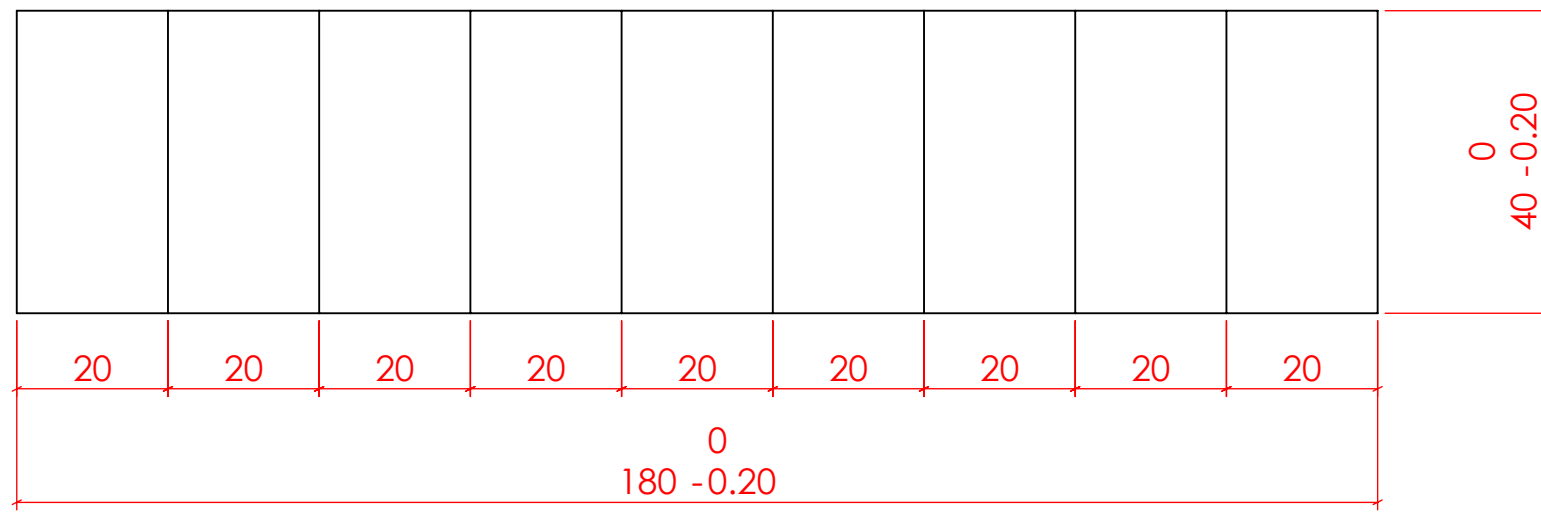
WEIGHT:

Enable 3D View



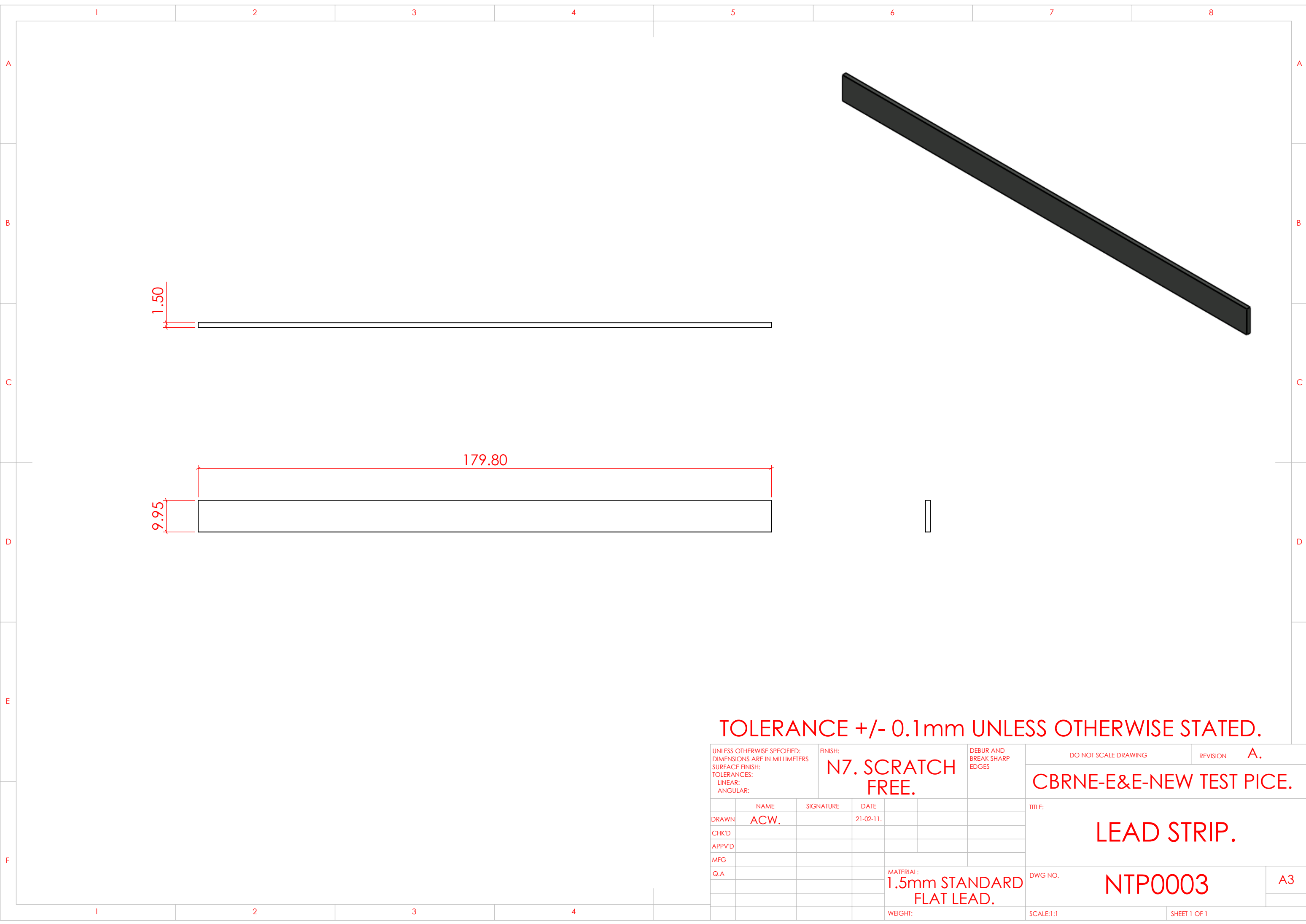
TOLERANCE +/- 0.1mm UNLESS OTHERWISE STATED.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH: N7. NATURAL ANODISED.		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION A.	
SURFACE FINISH:						TITLE: CBRNE-E&W-NEW TEST PIECE.			
TOLERANCES:						ANODISED ALUMINIUM STEP BLOCK.			
LINEAR:									
ANGULAR:						DWG NO. NTP0001		A3	
DRAWN ACW.		SIGNATURE		DATE 21-02-11.		MATERIAL: ALUMINIUM.		SCALE:1:1	
CHK'D						WEIGHT:		SHEET 1 OF 1	
APPV'D									
MFG									
Q.A									



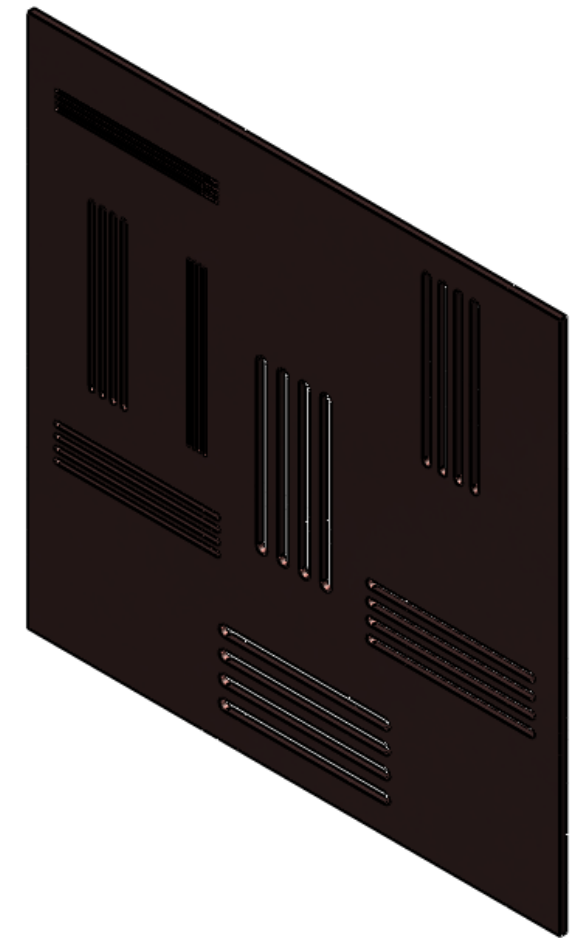
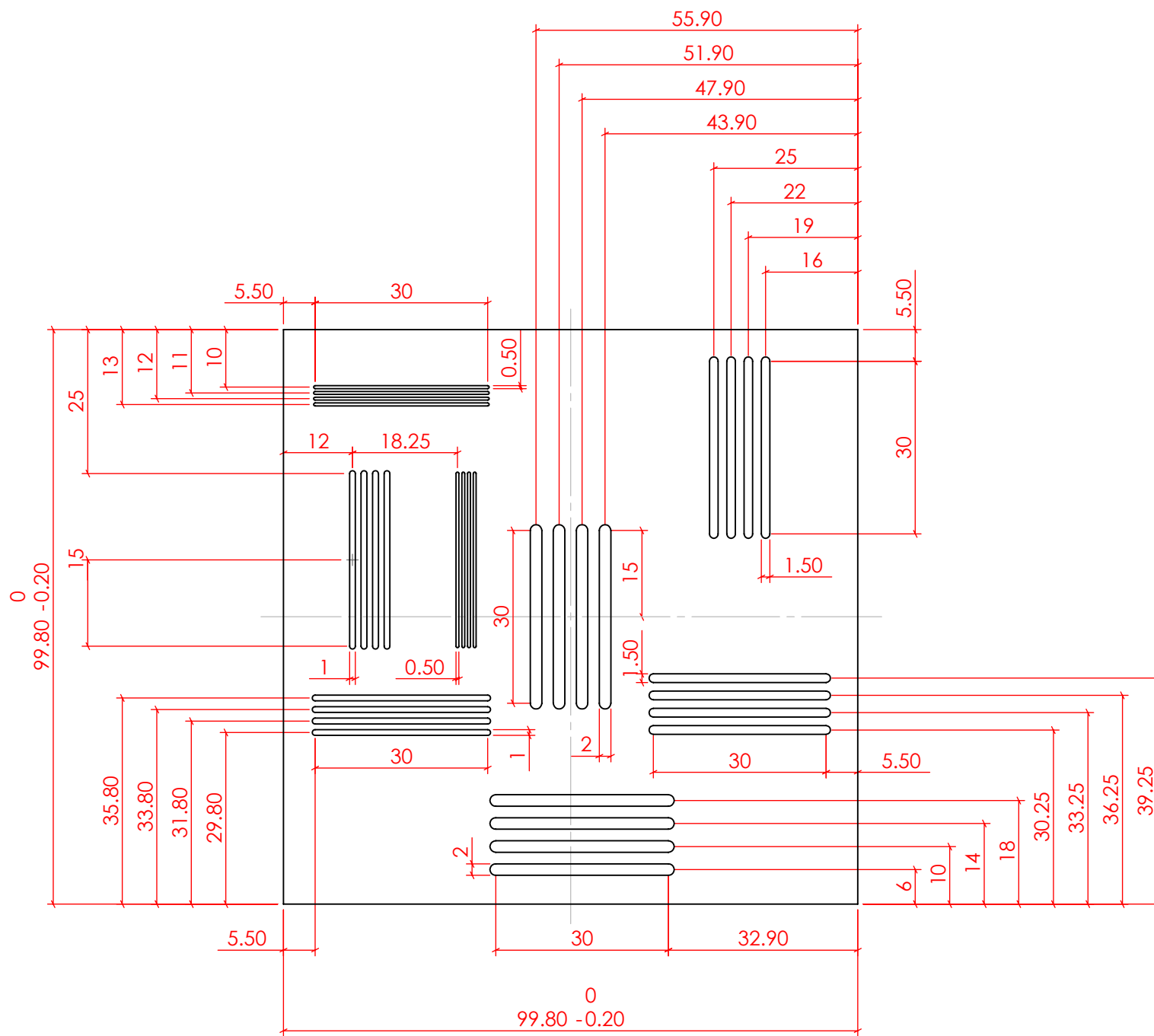
TOLERANCE +/- 0.1mm UNLESS OTHERWISE STATED.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH: N7. CLEAR ZINK PASSIVATE.		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION A.	
SURFACE FINISH:		DRAWN ACW.		DATE 21-02-11.		TITLE: ZINK PLATED MILD STEEL STEP BLOCK.		DWG NO. NTP0002	
TOLERANCES: LINEAR: ANGULAR:									
MFG		NAME		SIGNATURE		MATERIAL: MILD STEEL.		SCALE:1:1	
Q.A		DRAWN		DATE		WEIGHT:		SHEET 1 OF 1	
		CHK'D				A3			
		APPV'D							



TOLERANCE +/- 0.1mm UNLESS OTHERWISE STATED.

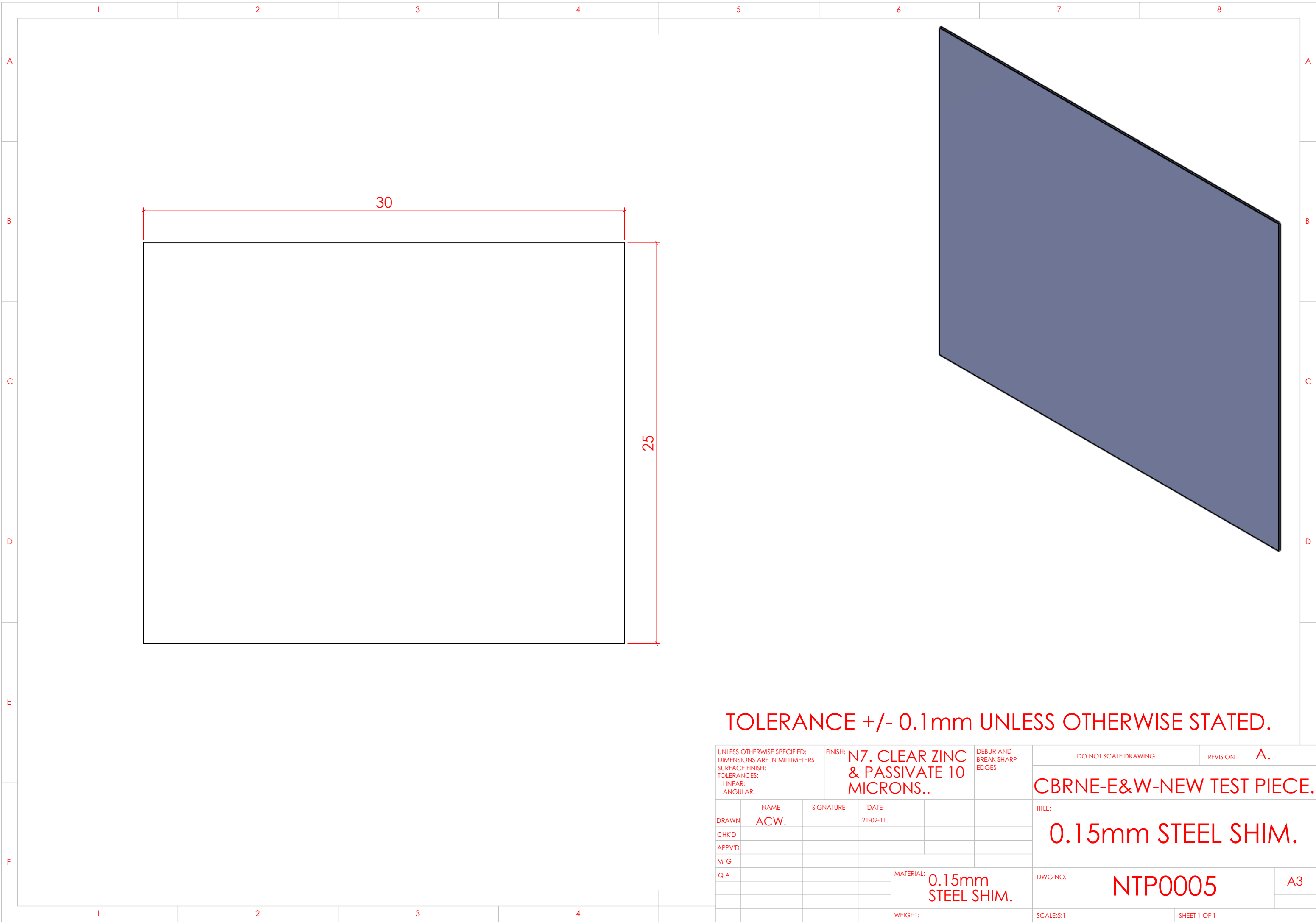
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH: N7. SCRATCH FREE.		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION A.																																									
SURFACE FINISH:		TITLE: LEAD STRIP.		<table border="1"> <tr> <td colspan="2">DRAWN ACW.</td> <td colspan="2">DATE 21-02-11.</td> <td colspan="2">DWG NO. NTP0003</td> <td colspan="2">A3</td> </tr> <tr> <td colspan="2">CHK'D</td> <td colspan="2"></td> <td colspan="2">SCALE:1:1</td> <td colspan="2">SHEET 1 OF 1</td> </tr> <tr> <td colspan="2">APPV'D</td> <td colspan="2"></td> <td colspan="2">MATERIAL: 1.5mm STANDARD FLAT LEAD.</td> <td colspan="2"></td> </tr> <tr> <td colspan="2">MFG</td> <td colspan="2"></td> <td colspan="2">WEIGHT:</td> <td colspan="2"></td> </tr> <tr> <td colspan="2">Q.A</td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> </tr> </table>						DRAWN ACW.		DATE 21-02-11.		DWG NO. NTP0003		A3		CHK'D				SCALE:1:1		SHEET 1 OF 1		APPV'D				MATERIAL: 1.5mm STANDARD FLAT LEAD.				MFG				WEIGHT:				Q.A							
DRAWN ACW.										DATE 21-02-11.		DWG NO. NTP0003		A3																																			
CHK'D										SCALE:1:1		SHEET 1 OF 1																																					
APPV'D										MATERIAL: 1.5mm STANDARD FLAT LEAD.																																							
MFG										WEIGHT:																																							
Q.A																																																	
TOLERANCES:																																																	
LINEAR:																																																	
ANGULAR:																																																	



TOLERANCE +/- 0.1mm UNLESS OTHERWISE STATED.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH: N7. SCRATCH FREE.		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION A.	
DRAWN ACW.						TITLE: CBRNE-E&W-NEW TEST PIECE.			
CHK'D						SLOTTED COPPER PLATE.			
APPV'D						DWG NO. NTP0004			
MFG						MATERIAL: 18 SWG COPPER.			
Q.A.						WEIGHT:			
						SCALE:1:1			
						SHEET 1 OF 1			

A3

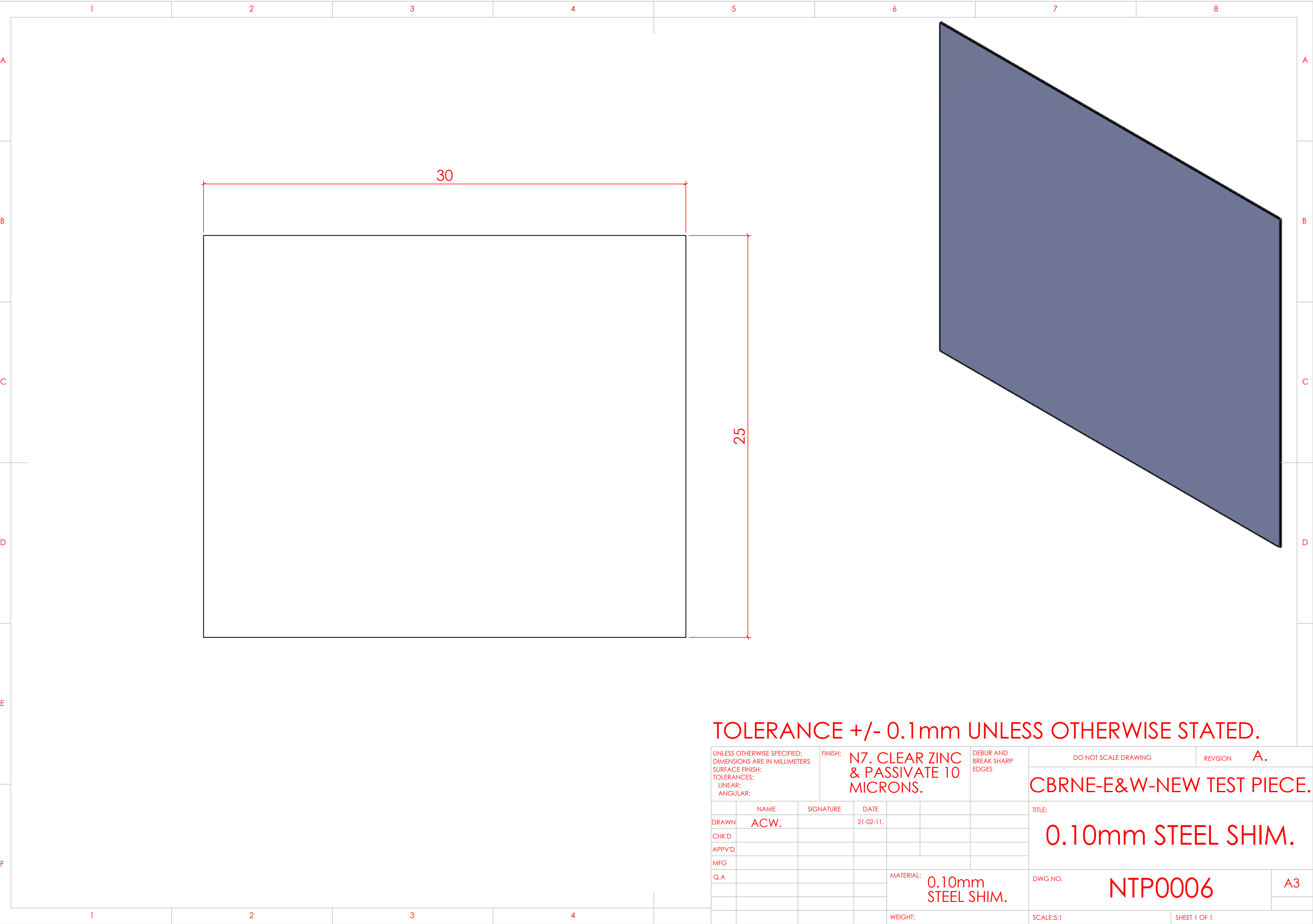


30

25

TOLERANCE +/- 0.1mm UNLESS OTHERWISE STATED.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH: N7. CLEAR ZINC & PASSIVATE 10 MICRONS..		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION A.	
SURFACE FINISH:						TITLE: CBRNE-E&W-NEW TEST PIECE.			
TOLERANCES:						TITLE: 0.15mm STEEL SHIM.			
LINEAR:						DRAWN: ACW.		DATE: 21-02-11.	
ANGULAR:						CHK'D			
						APPV'D			
						MFG			
						Q.A			
						MATERIAL: 0.15mm STEEL SHIM.		DWG NO. NTP0005	
						WEIGHT:		SCALE:5:1	
								SHEET 1 OF 1	
								A3	



TOLERANCE +/- 0.1mm UNLESS OTHERWISE STATED.

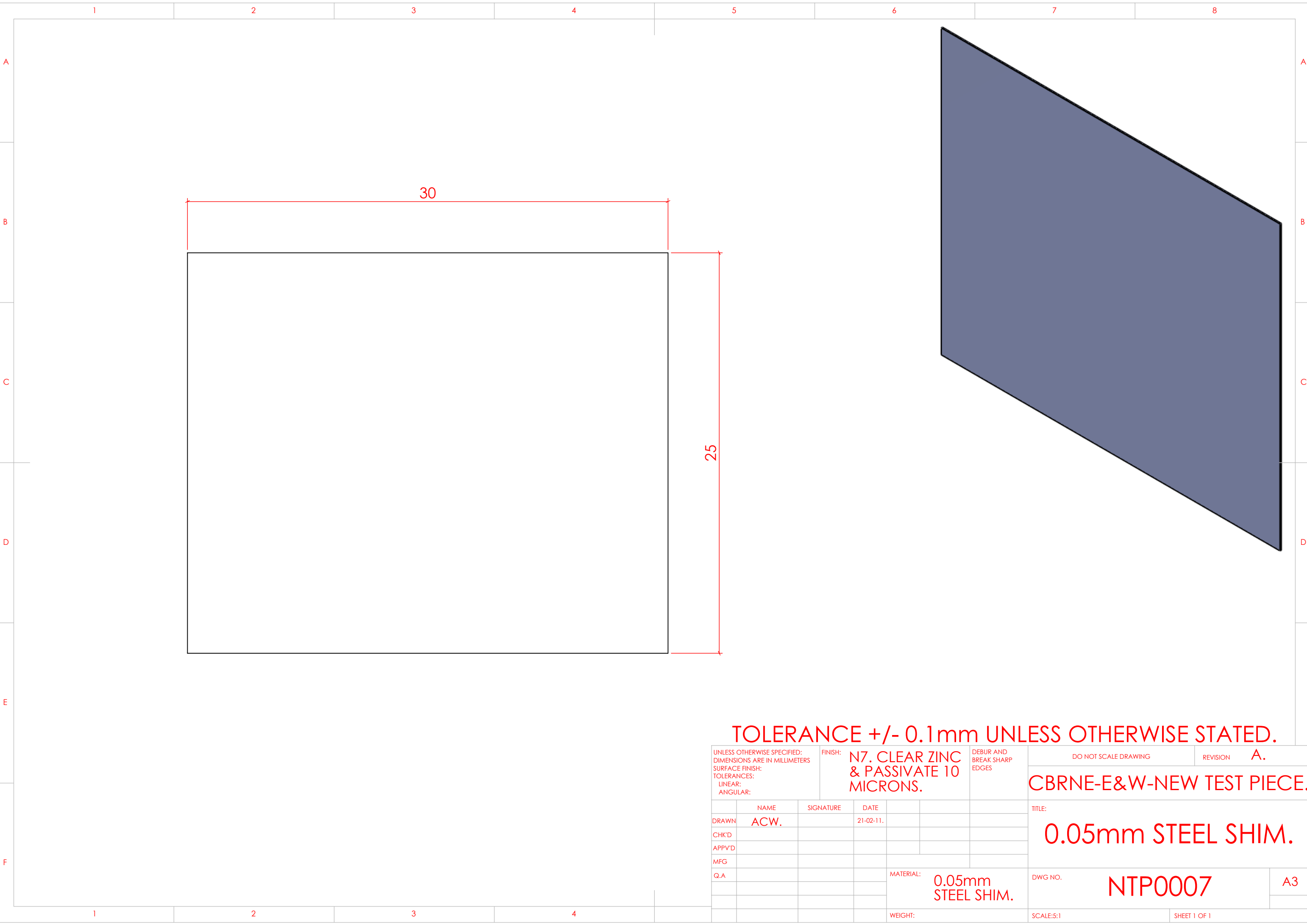
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SURFACE FINISH:									
TOLERANCES:									
LINEAR:									
ANGULAR:									
DRAWN ACW.		SIGNATURE		DATE 21-02-11.		TITLE:			
CHK'D						0.10mm STEEL SHIM.			
APPV'D									
MFG									
Q.A						MATERIAL: 0.10mm STEEL SHIM.		DWG NO. NTP0006	
						WEIGHT:		SCALE:5:1	
								SHEET 1 OF 1	

CBRNE-E&W-NEW TEST PIECE.

0.10mm STEEL SHIM.

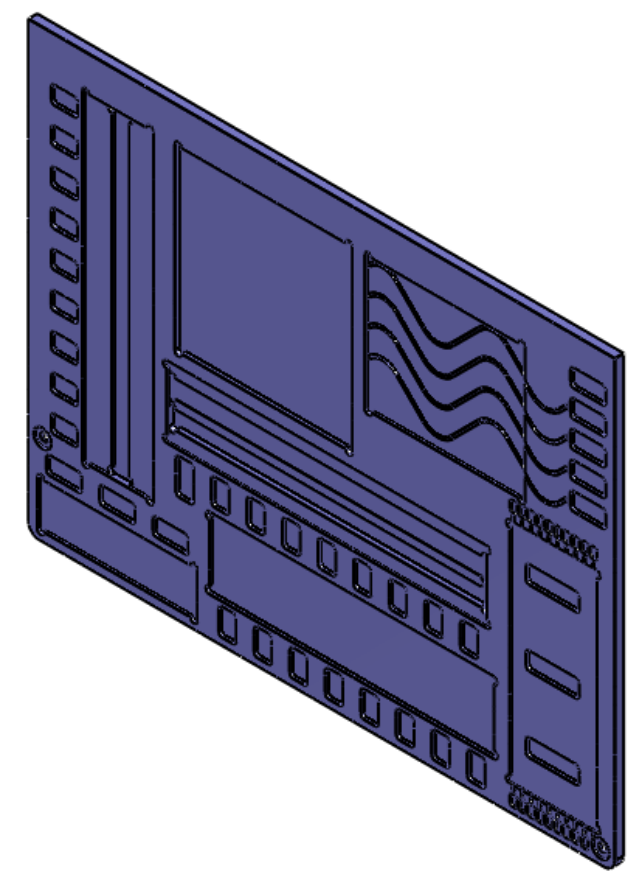
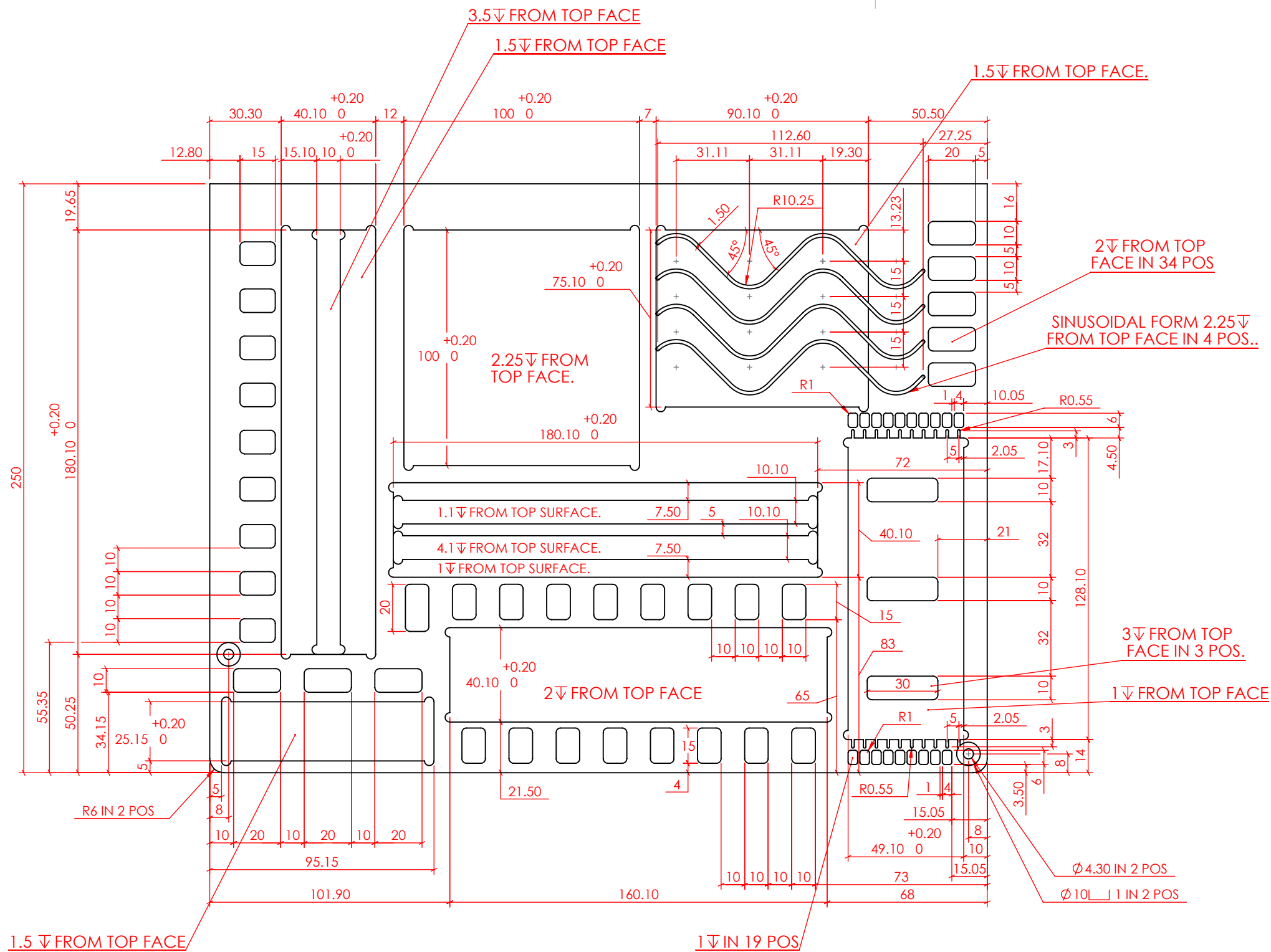
NTP0006

A3



TOLERANCE +/- 0.1mm UNLESS OTHERWISE STATED.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH: N7. CLEAR ZINC & PASSIVATE 10 MICRONS.		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION A.	
SURFACE FINISH:								TITLE:	
TOLERANCES:								CBRNE-E&W-NEW TEST PIECE.	
LINEAR:								0.05mm STEEL SHIM.	
ANGULAR:								DWG NO. NTP0007	
DRAWN ACW.		SIGNATURE		DATE 21-02-11.				A3	
CHK'D									
APPV'D									
MFG									
Q.A						MATERIAL: 0.05mm STEEL SHIM.		SCALE:5:1	
						WEIGHT:		SHEET 1 OF 1	

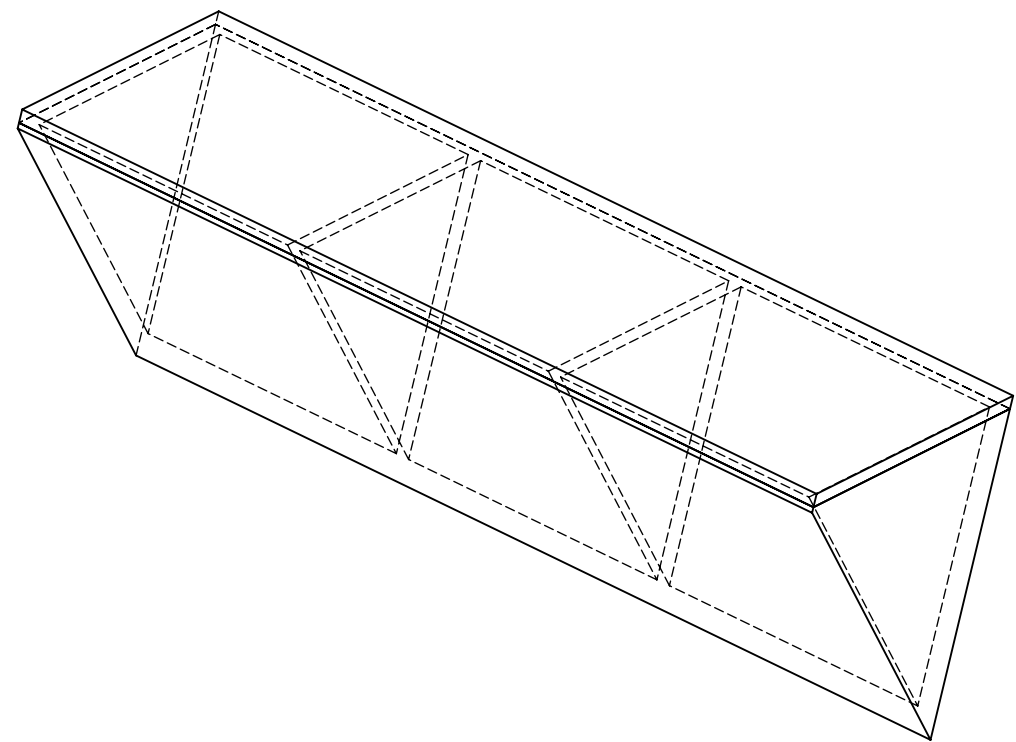
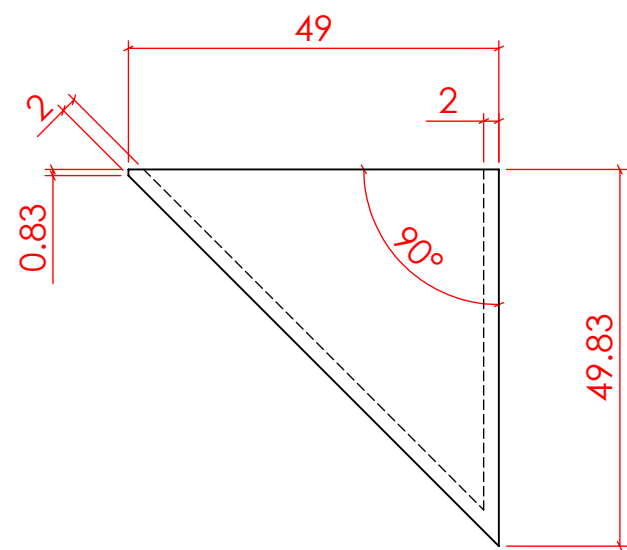
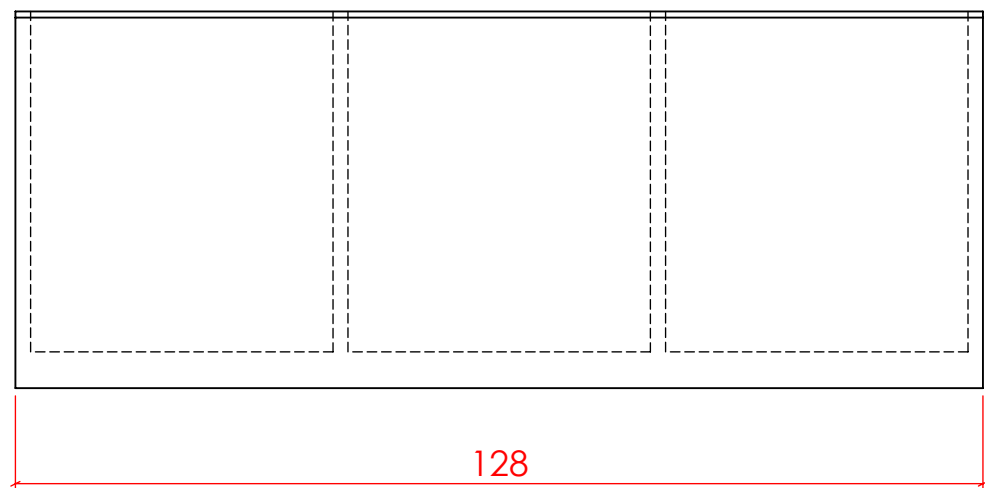
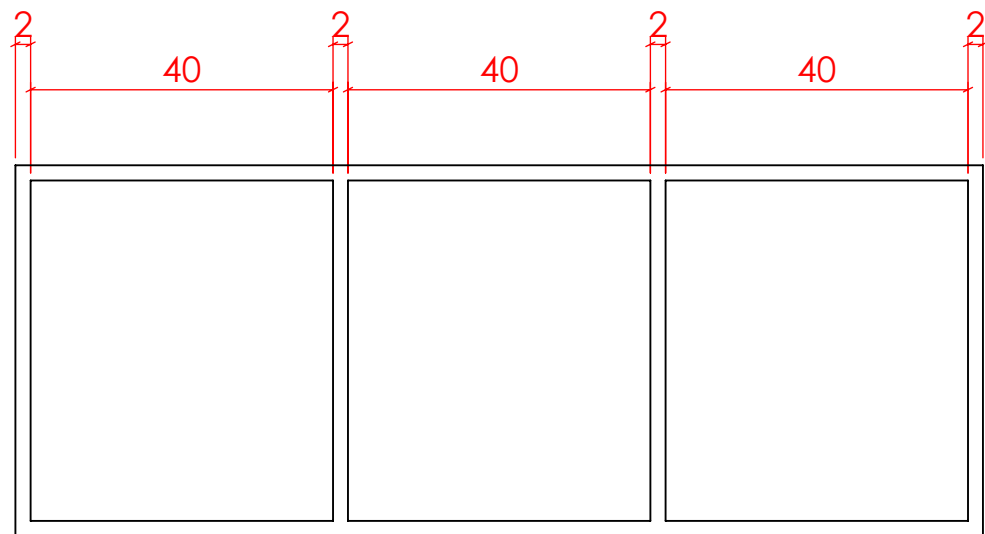


ALL TOOL OVERRUN AND CORNER RADII TO BE 2mm (Ø4) UNLESS OTHERWISE STATED.

TOLERANCE +/- 0.1mm UNLESS OTHERWISE STATED.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH: N7. SCRATCH FREE.		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION A.	
SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:								TITLE: CBRNE-E&W-NEW TEST PIECE.	
DRAWN: ACW.		SIGNATURE		DATE: 28-02-11.				TEST PIECE BASE PLATE.	
CHK'D									
APPV'D									
MFG									
Q.A						MATERIAL: 5mm BLACK CAST ACRYLIC.		DWG NO. NTP0008	
						WEIGHT:		SCALE:1:2	
								SHEET 1 OF 1	

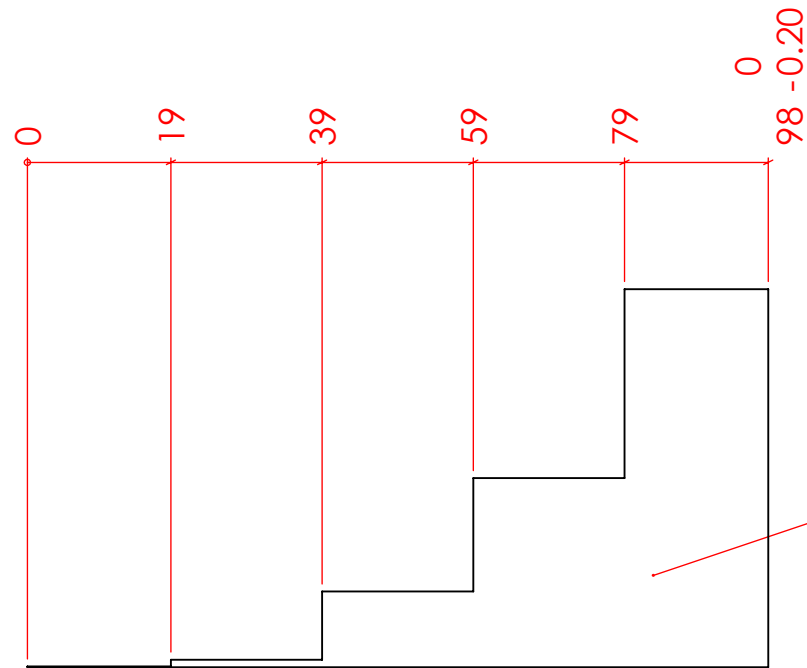
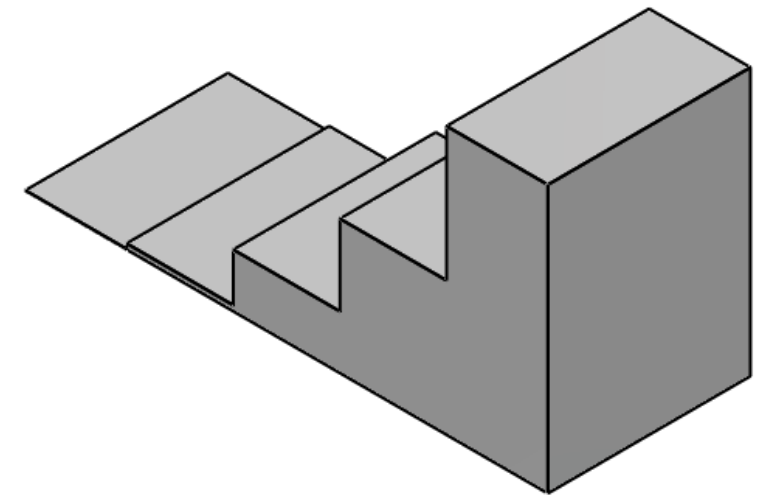
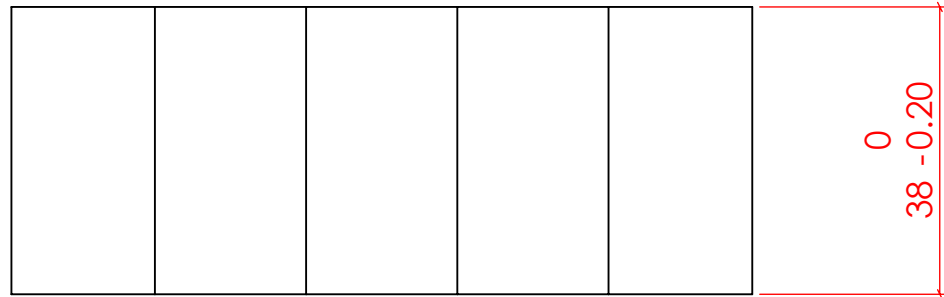
A3



COVER TO BE SEALED AFTER ADDITION OF SUBSTANCES.

TOLERANCE +/- 0.1 mm UNLESS OTHERWISE STATED.

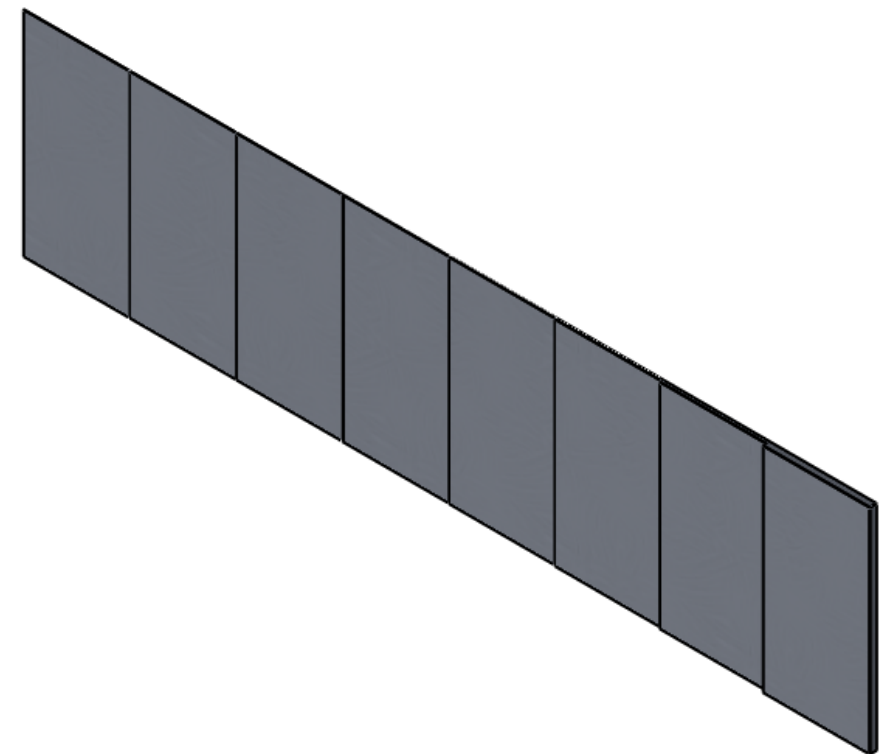
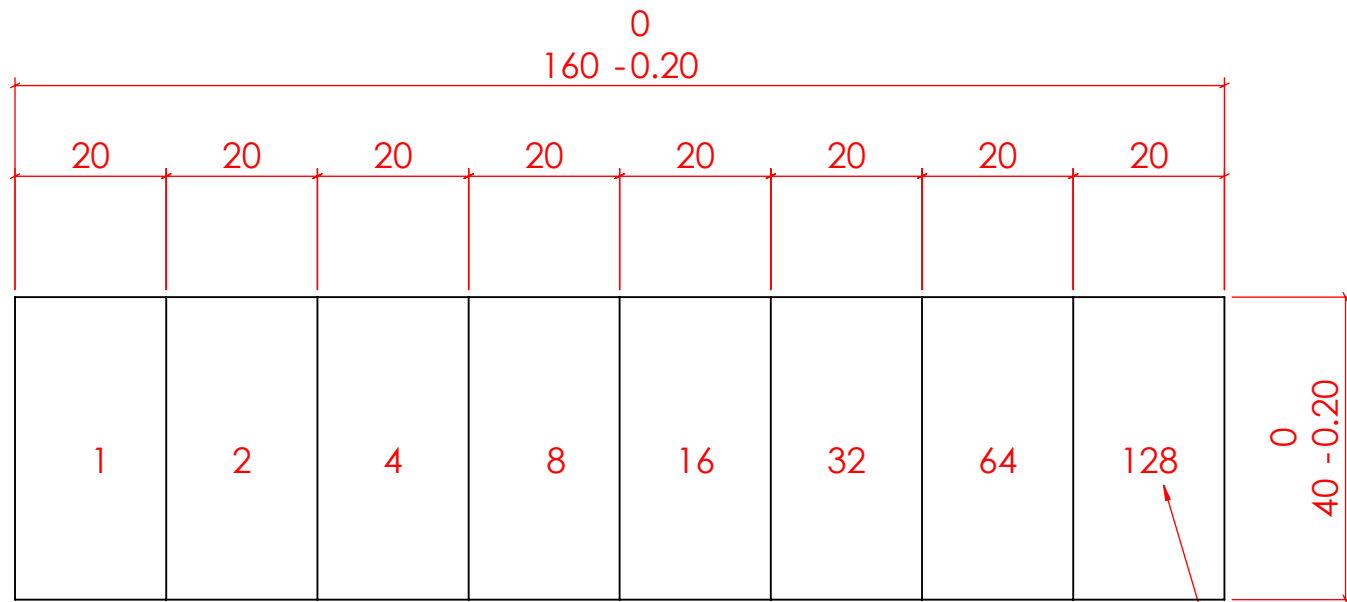
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SURFACE FINISH:									
TOLERANCES:									
LINEAR:									
ANGULAR:									
DRAWN	NAME	SIGNATURE	DATE			TITLE:			
CHK'D	ACW.		22-02-11.			SUBSTANCE CONTAINERS.			
APPV'D						DWG NO.		NTP0009	
MFG						SCALE:1:1		SHEET 1 OF 1	
Q.A						MATERIAL:		A3	
						INJECTION MOULDED CLEAR ACRYLIC.			
						WEIGHT:			



STEP 1 = 1 SHEET OF PAPER, CUT THIS SHEET OVER SIZE BY 2mm ALL AROUND.
 STEP 2 = 10 SHEETS OF PAPER.
 STEP 3 = 100 SHEETS OF PAPER.
 STEP 4 = 250 SHEETS OF PAPER.
 STEP 5 = 500 SHEETS OF PAPER.

TOLERANCE +/- 0.1mm UNLESS OTHERWISE STATED.

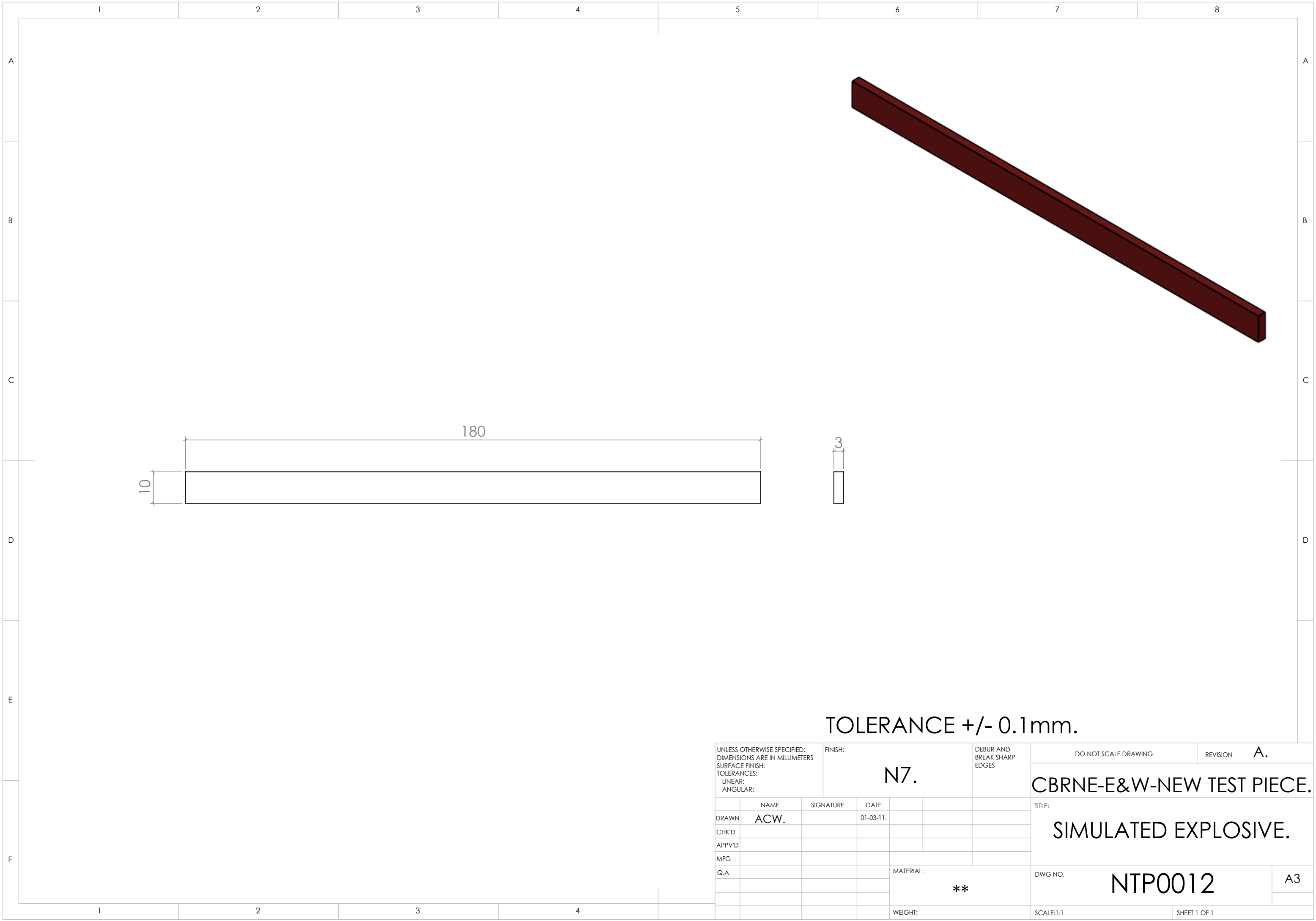
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH: WRINKLE FREE.		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION A.	
SURFACE FINISH:						CBRNE-E&W-NEW TEST PIECE.			
TOLERANCES:						TITLE: PAPER STEP WEDGE.			
LINEAR:						DRAWN		DATE	
ANGULAR:						NAME ACW.		SIGNATURE	
						CHK'D		DATE 08-03-11.	
						APPV'D			
						MFG			
						Q.A			
						MATERIAL: STANDARD PRINTING PAPER 80gsm 0.1mm THICK.		DWG NO. NTP0010	
						WEIGHT:		SCALE:1:1	
								SHEET 1 OF 1	
								A3	



NUMBERS DENOTE THE No OF THICKNESSES OF 0.01mm ALUMINIUM KITCHEN FOIL.

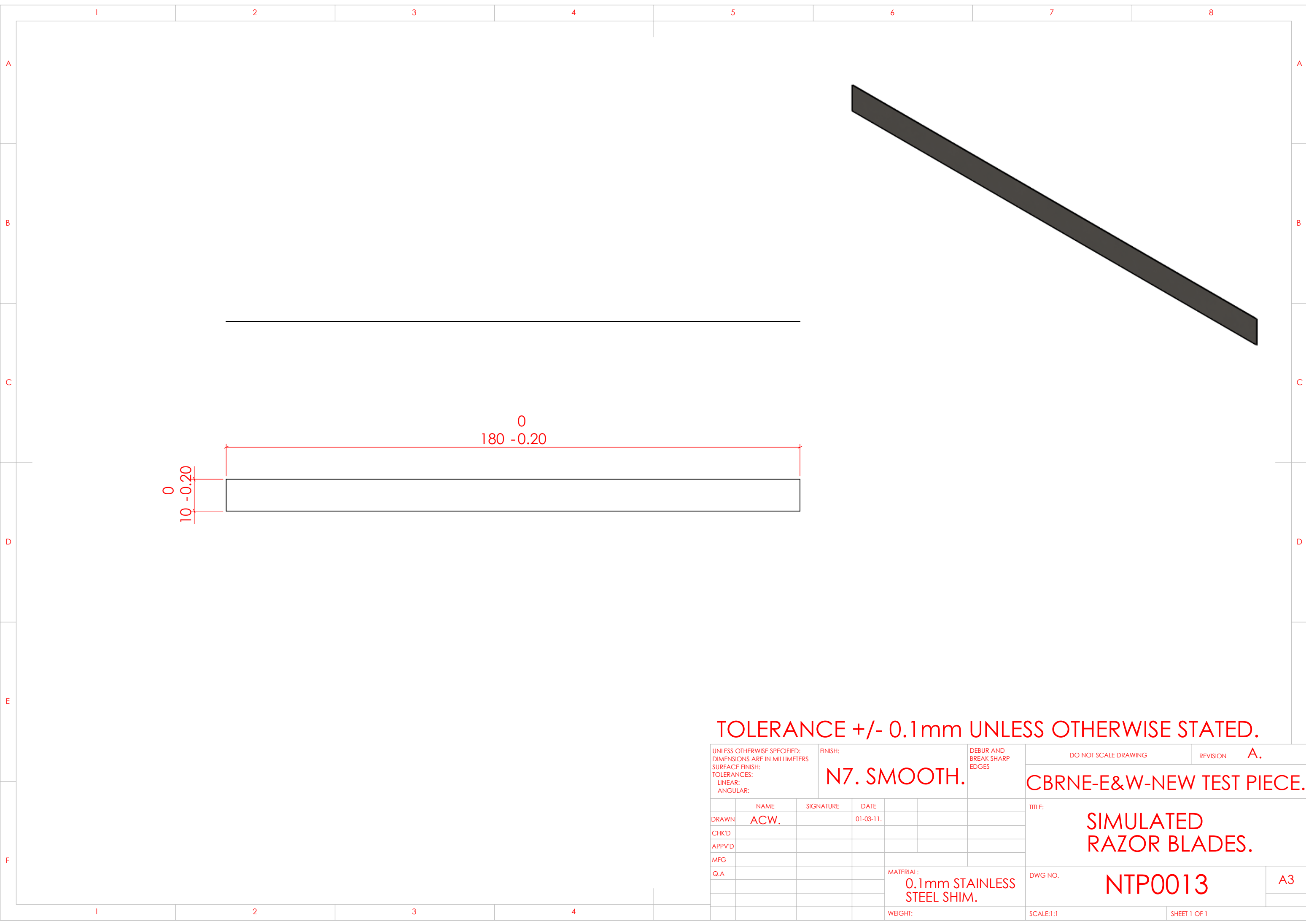
TOLERANCE +/- 0.1mm.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH: SMOOTH.		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION A.	
SURFACE FINISH:						TITLE: ALUMINIUM FOIL STEP WEDGE.			
TOLERANCES:									
LINEAR:									
ANGULAR:									
DRAWN	NAME ACW.	SIGNATURE	DATE 01-03-11.			DWG NO. NTP0011		A3	
CHK'D						SCALE:1:1		SHEET 1 OF 1	
APPV'D						MATERIAL: ALUMINIUM KITCHEN FOIL.			
MFG						WEIGHT:			
Q.A									



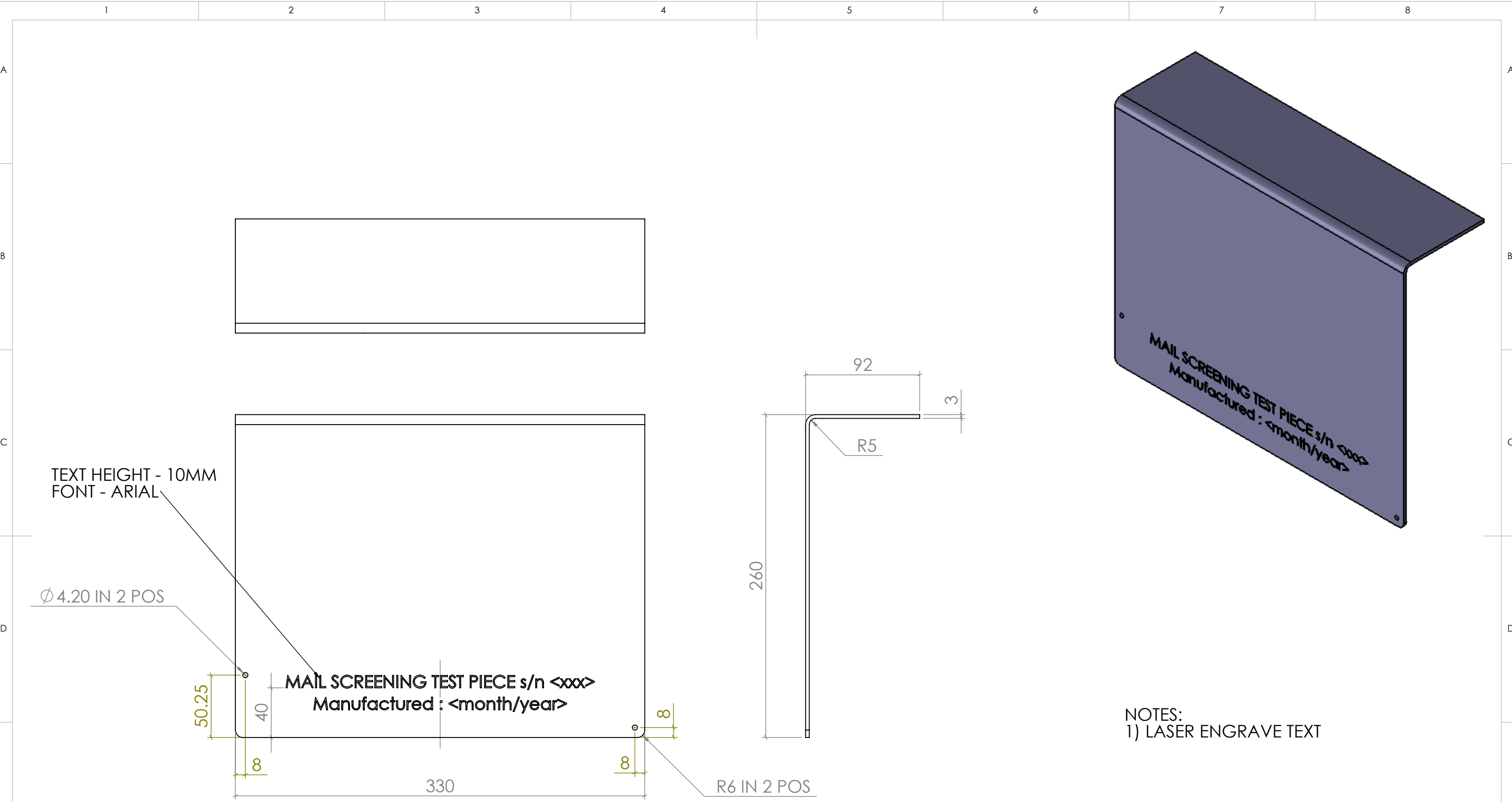
TOLERANCE +/- 0.1mm.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH: N7.		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION A.	
SURFACE FINISH:						TITLE: CBRNE-E&W-NEW TEST PIECE.			
TOLERANCES:						SIMULATED EXPLOSIVE.			
LINEAR:						DWG NO. NTP0012		A3	
ANGULAR:						SCALE:1:1		SHEET 1 OF 1	
DRAWN	NAME ACW.	SIGNATURE	DATE 01-03-11.	MATERIAL: **		WEIGHT:			
CHK'D									
APPV'D									
MFG									
Q.A									



TOLERANCE +/- 0.1mm UNLESS OTHERWISE STATED.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH: N7. SMOOTH.		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION A.	
SURFACE FINISH:						TITLE: SIMULATED RAZOR BLADES.			
TOLERANCES:									
LINEAR:									
ANGULAR:									
DRAWN	NAME	SIGNATURE	DATE			DWG NO. NTP0013		A3	
CHK'D									
APPV'D									
MFG									
Q.A						MATERIAL: 0.1mm STAINLESS STEEL SHIM.			
						WEIGHT:		SCALE:1:1	
								SHEET 1 OF 1	



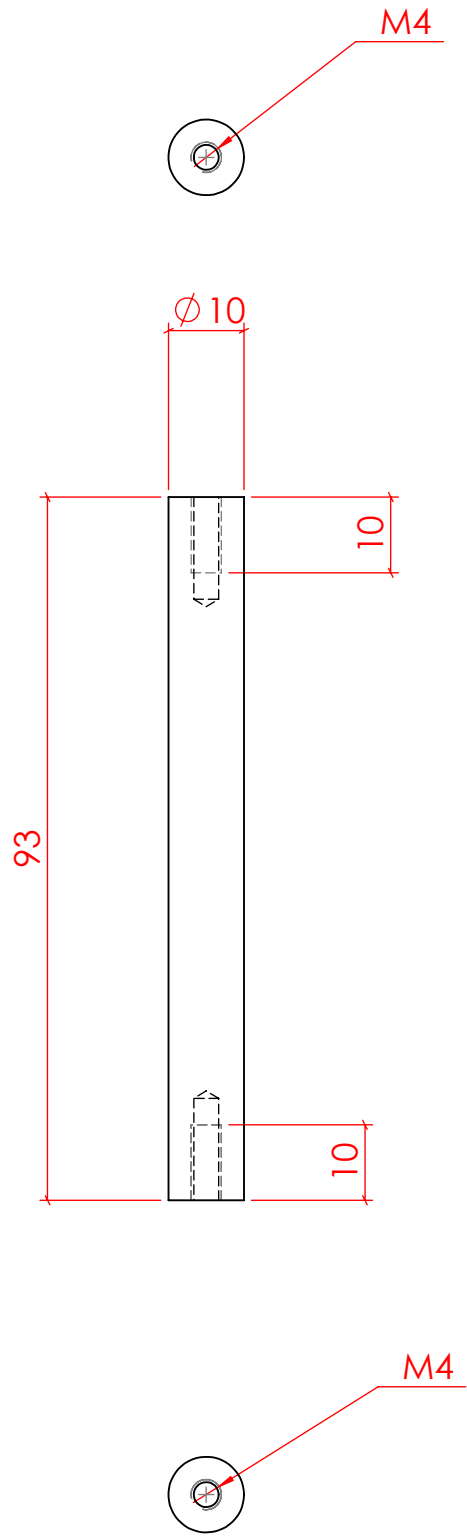
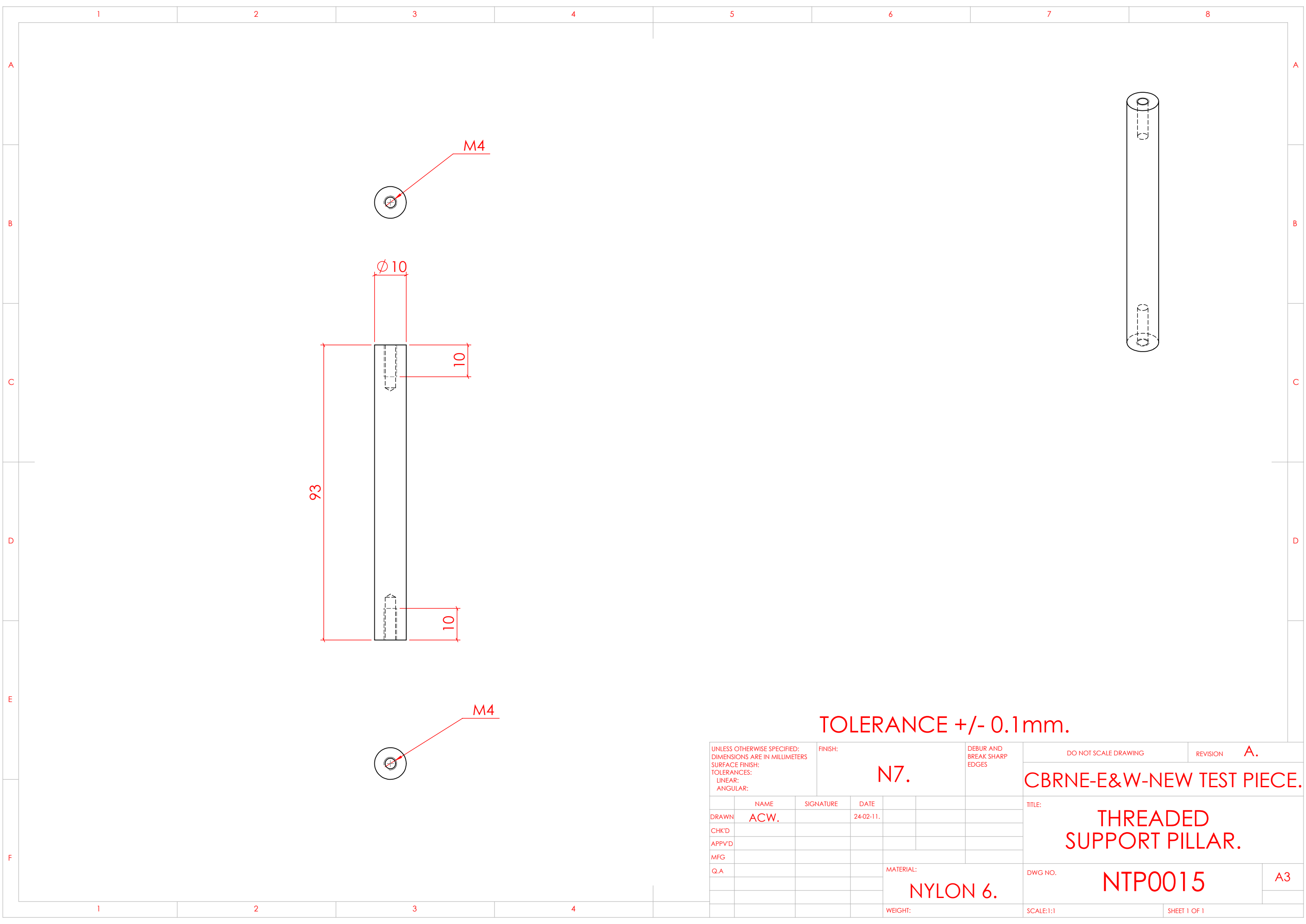
NOTES:
1) LASER ENGRAVE TEXT

TOLERANCE +/- 0.1mm.

REVISIONS				
REV	REF	DESCRIPTION	DATE	APPROVED
B	BS	TEXT ADDED TO COVER, NOTE ADDED	14/03/2013	RJW

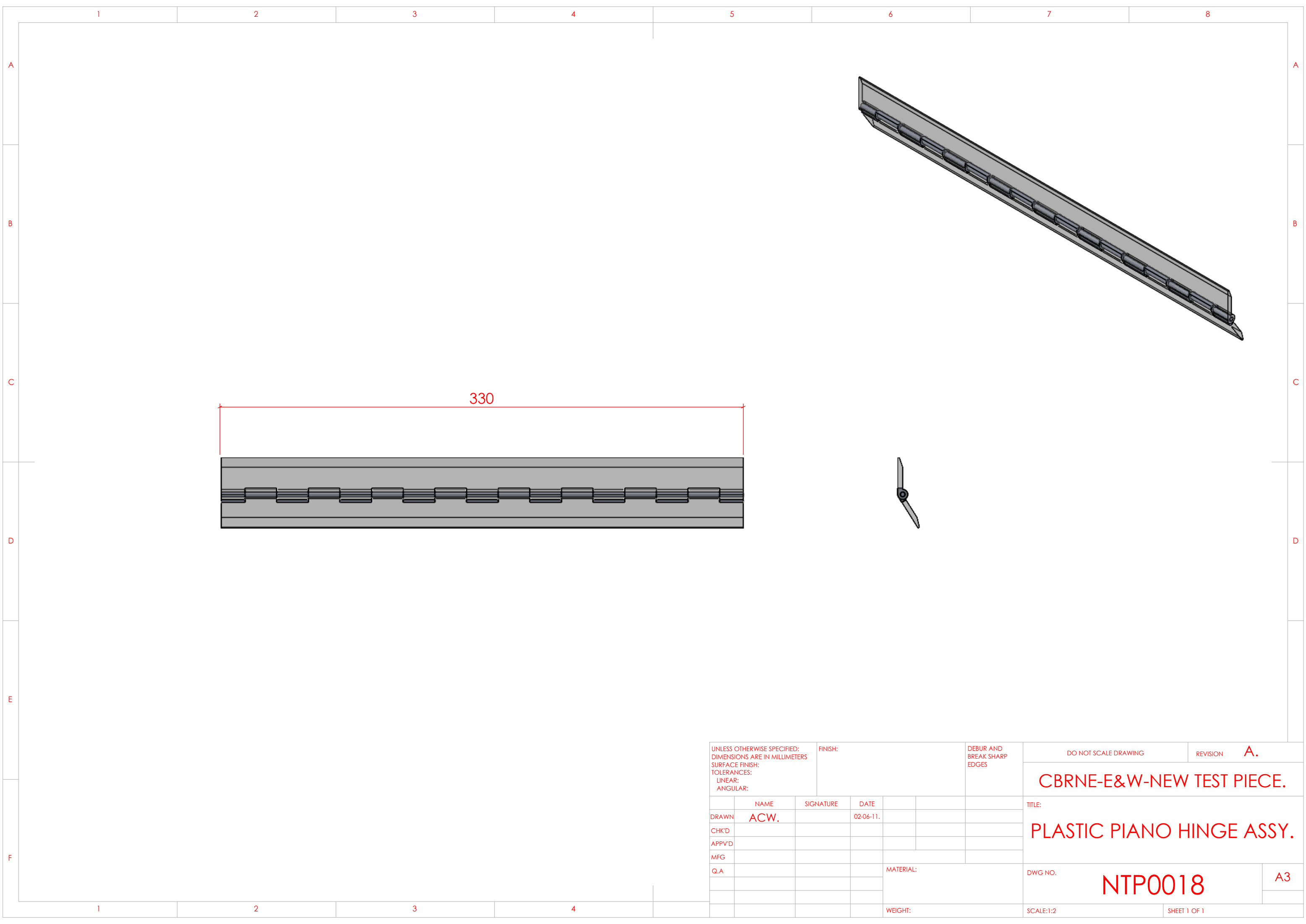
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SURFACE FINISH:									
TOLERANCES:									
LINEAR:									
ANGULAR:									
DRAWN		NAME		SIGNATURE		DATE		TITLE:	
CHK'D		ACW.				01-03-11.		NEW TEST PIECE COVER.	
APPV'D									
MFG									
Q.A									
						MATERIAL:		DWG NO.	
						BLACK CAST ACRYLIC.		NTP0014	
						WEIGHT:		SCALE:1:5	
								SHEET 1 OF 1	

A3

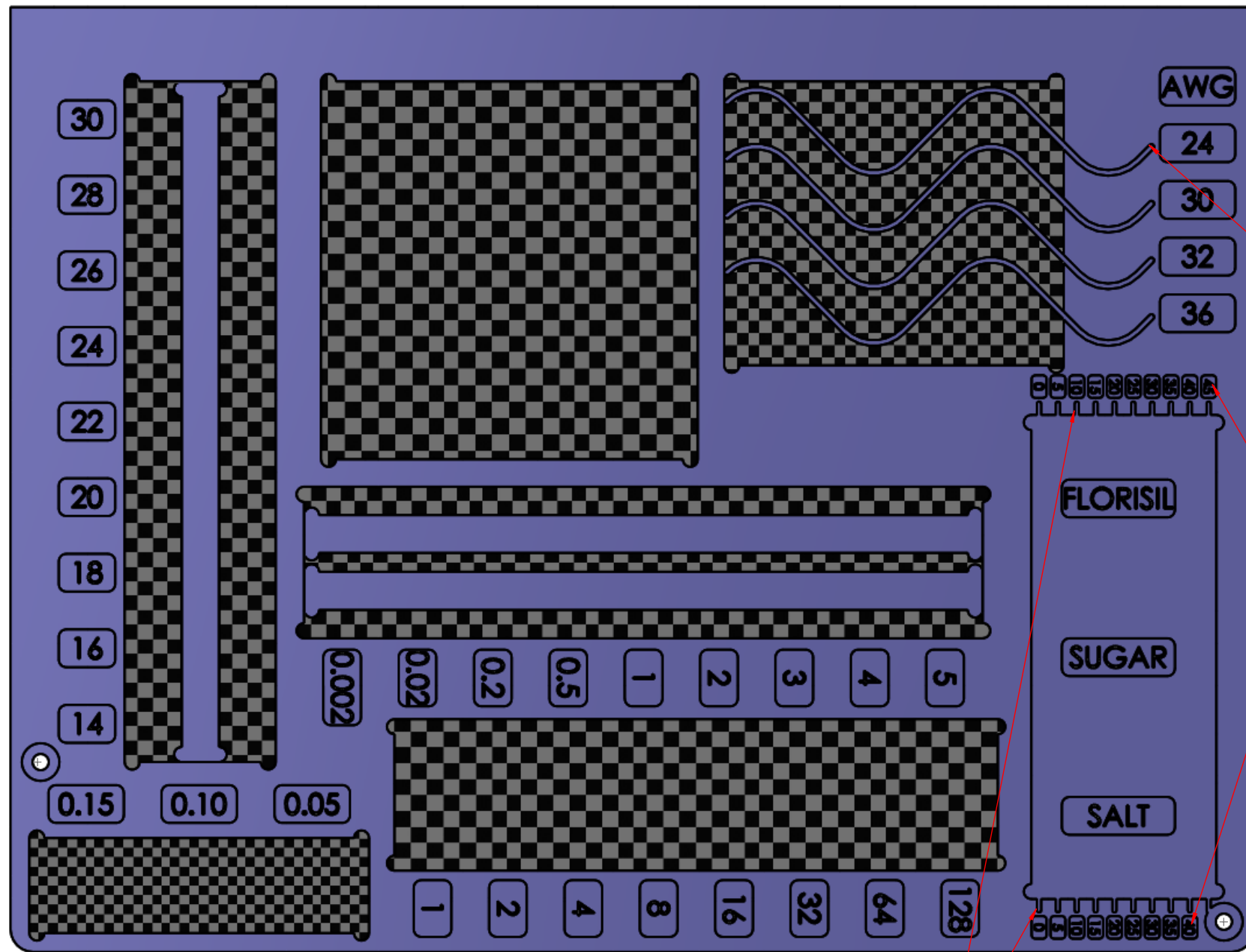


TOLERANCE +/- 0.1mm.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS				FINISH: N7.		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION A.	
SURFACE FINISH: LINEAR: ANGULAR:								CBRNE-E&W-NEW TEST PIECE.			
TITLE: THREADED SUPPORT PILLAR.								DRAWN ACW.		DATE 24-02-11.	
MFG								APPV'D		DWG NO. NTP0015	
Q.A								MATERIAL: NYLON 6.		SCALE:1:1	
WEIGHT:								SHEET 1 OF 1		A3	



UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS				FINISH:		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION A.	
SURFACE FINISH:								TITLE: CBRNE-E&W-NEW TEST PIECE.			
TOLERANCES:											
LINEAR:								TITLE: PLASTIC PIANO HINGE ASSY.			
ANGULAR:											
DRAWN	NAME	SIGNATURE	DATE					DWG NO.		NTP0018	
CHK'D								SCALE:1:2		A3	
APPV'D								SHEET 1 OF 1			
MFG											
Q.A						MATERIAL:					
						WEIGHT:					



INSERT APPROPRIATE GAUGE UN-INSULATED TINNED COPPER WIRE AND SECURE WITH 622 CYANOACRYLATE ADHESIVE.

THESE NUMBERS TO BE 3mm HIGH.

THESE GRADUATION MARKS TO BE FILLED WITH LEAD SECURED WITH 622 CYANOACRYLATE ADHESIVE.

FIT DOUBLE SIDED TAPE (VST 4050C) TO CHECKERBOARD MARKED AREAS. LETTERS & NUMBERS ARE 8mm HIGH IN CAST LEAD UNLESS OTHERWISE STATED, SECURED IN POSITION USING :- 3M DP810 ACRYLIC STRUCTURAL ADHESIVE.

CAST LEAD LETTERS & NUMBERS:- 8mm HIGH.

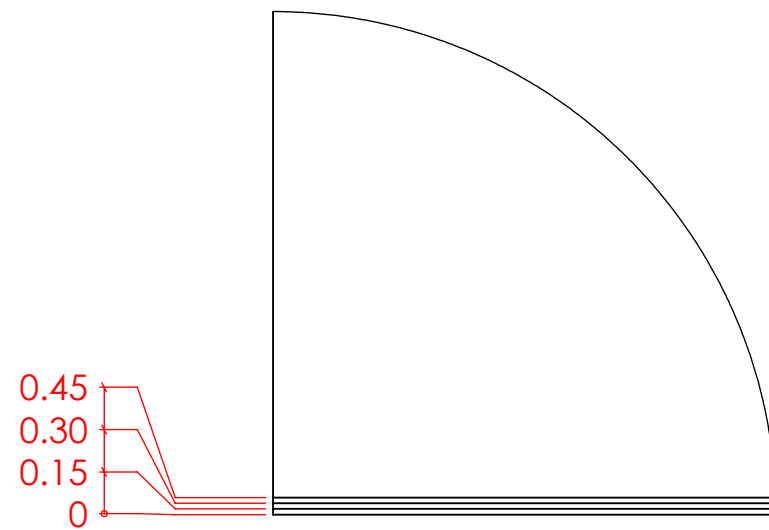
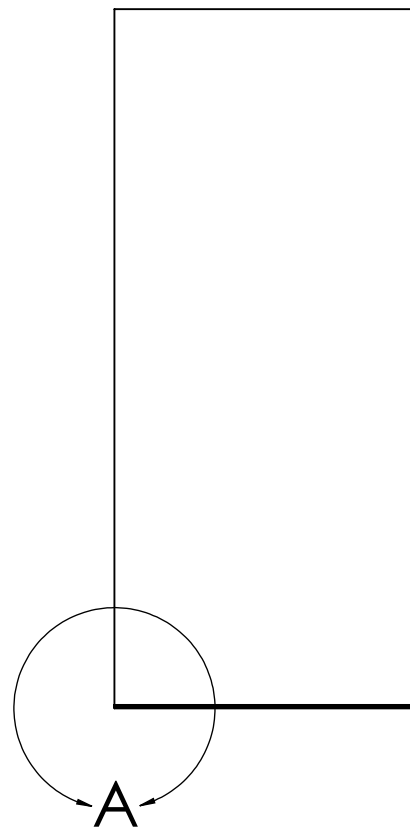
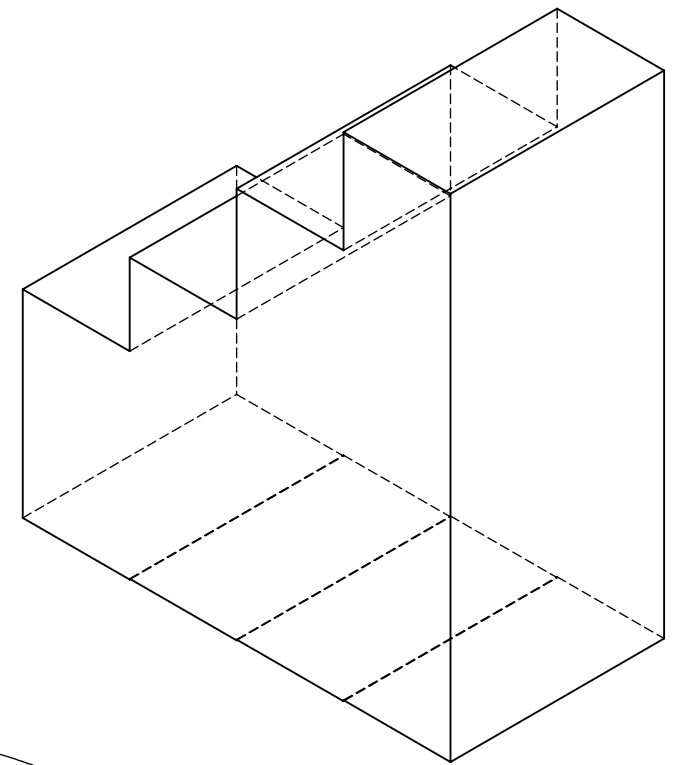
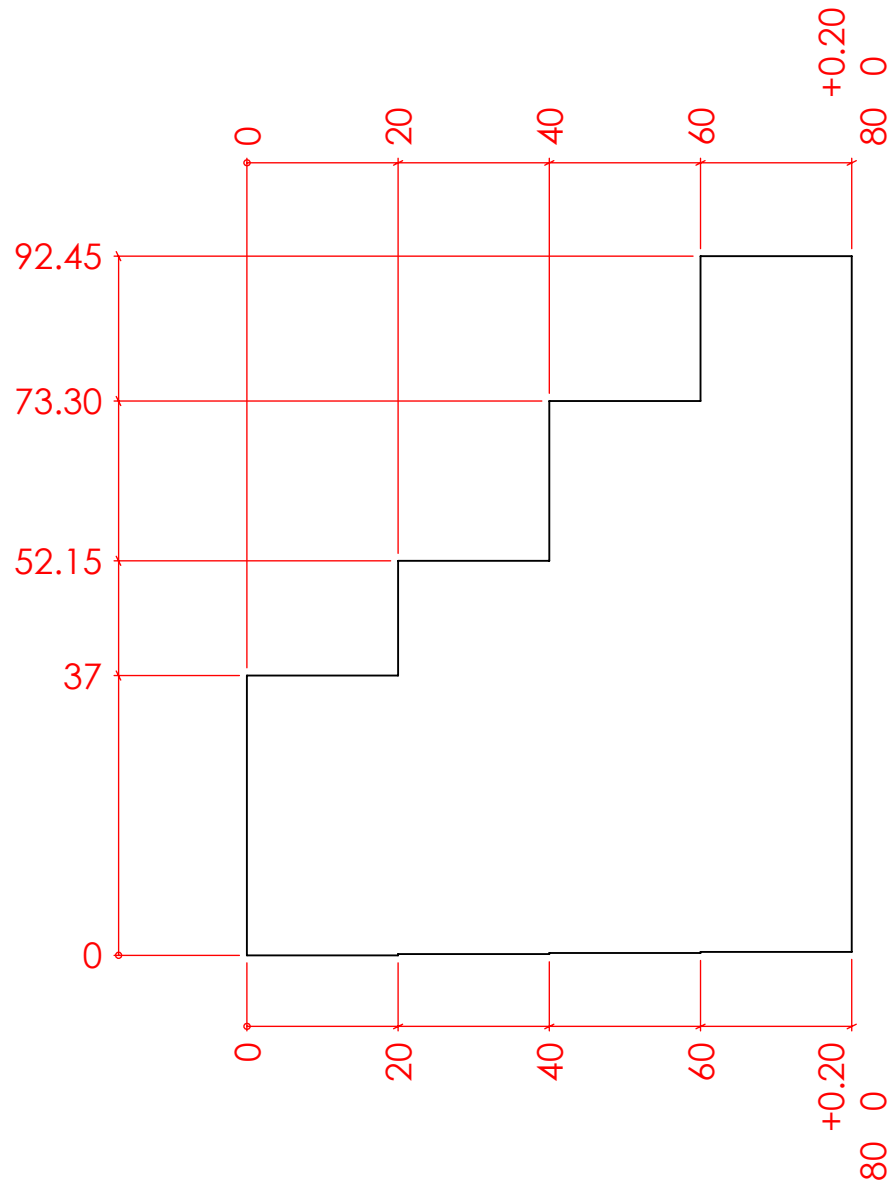
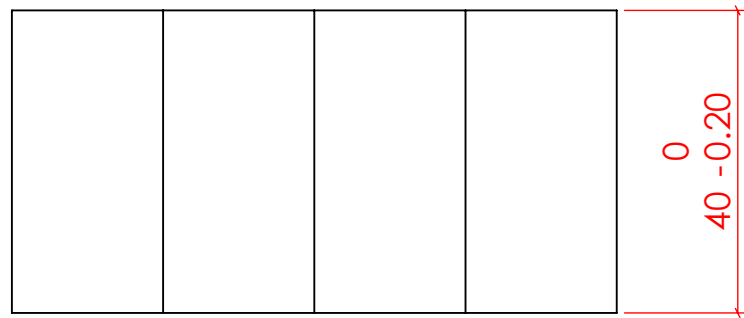
- LETTER 'A' = 3 OFF.
- LETTER 'F' = 1 OFF.
- LETTER 'G' = 2 OFF.
- LETTER 'I' = 2 OFF.
- LETTER 'L' = 3 OFF.
- LETTER 'O' = 1 OFF.
- LETTER 'R' = 2 OFF.
- LETTER 'S' = 3 OFF.
- LETTER 'T' = 1 OFF.
- LETTER 'U' = 1 OFF.
- LETTER 'W' = 1 OFF.
- NUMBER 0 = 15 OFF.
- NUMBER 1 = 9 OFF.
- NUMBER 2 = 15 OFF.
- NUMBER 3 = 6 OFF.
- NUMBER 4 = 6 OFF.
- NUMBER 5 = 4 OFF.
- NUMBER 6 = 5 OFF.
- NUMBER 7 = 0 OFF.
- NUMBER 8 = 4 OFF.

3mm HIGH NUMBERS:-

- NUMBER 0 = 10 OFF.
- NUMBER 1 = 4 OFF.
- NUMBER 2 = 4 OFF.
- NUMBER 3 = 4 OFF.
- NUMBER 4 = 3 OFF.
- NUMBER 5 = 9 OFF.

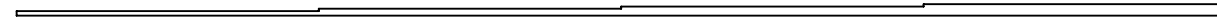
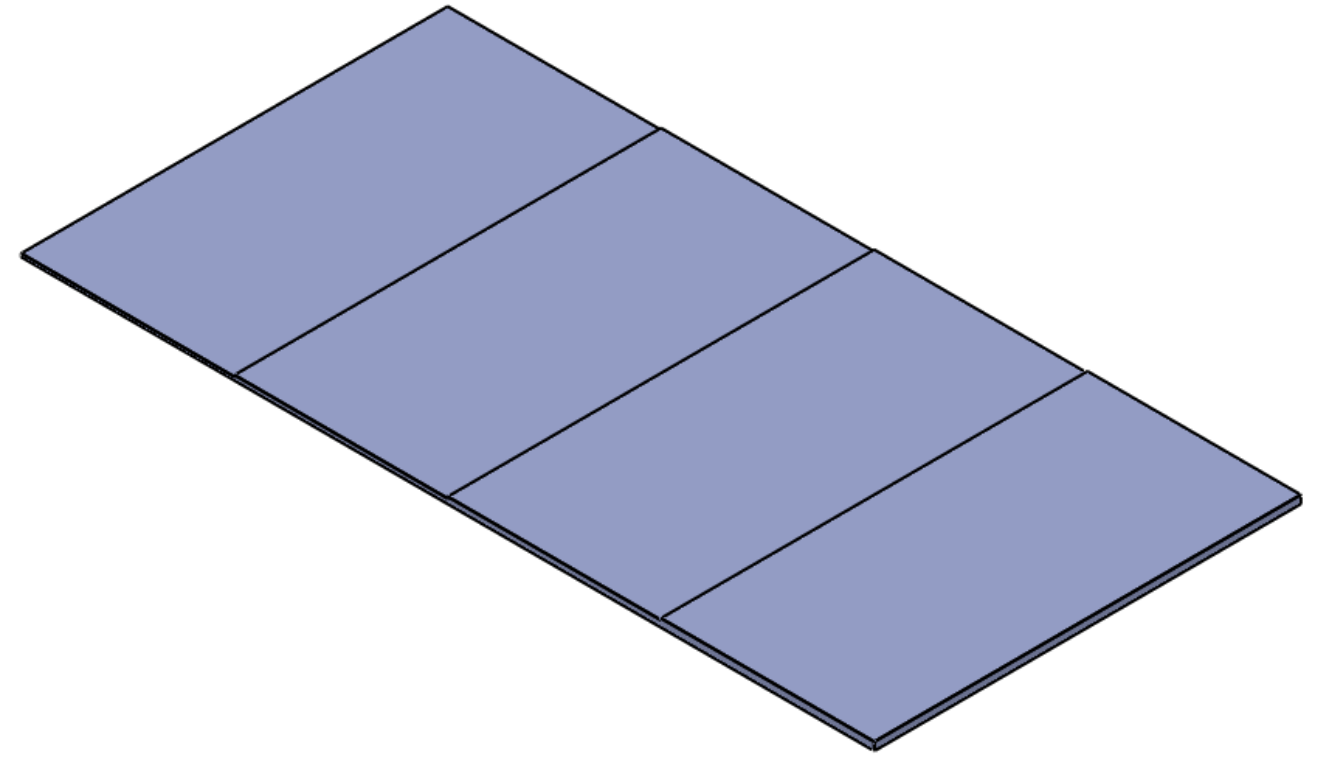
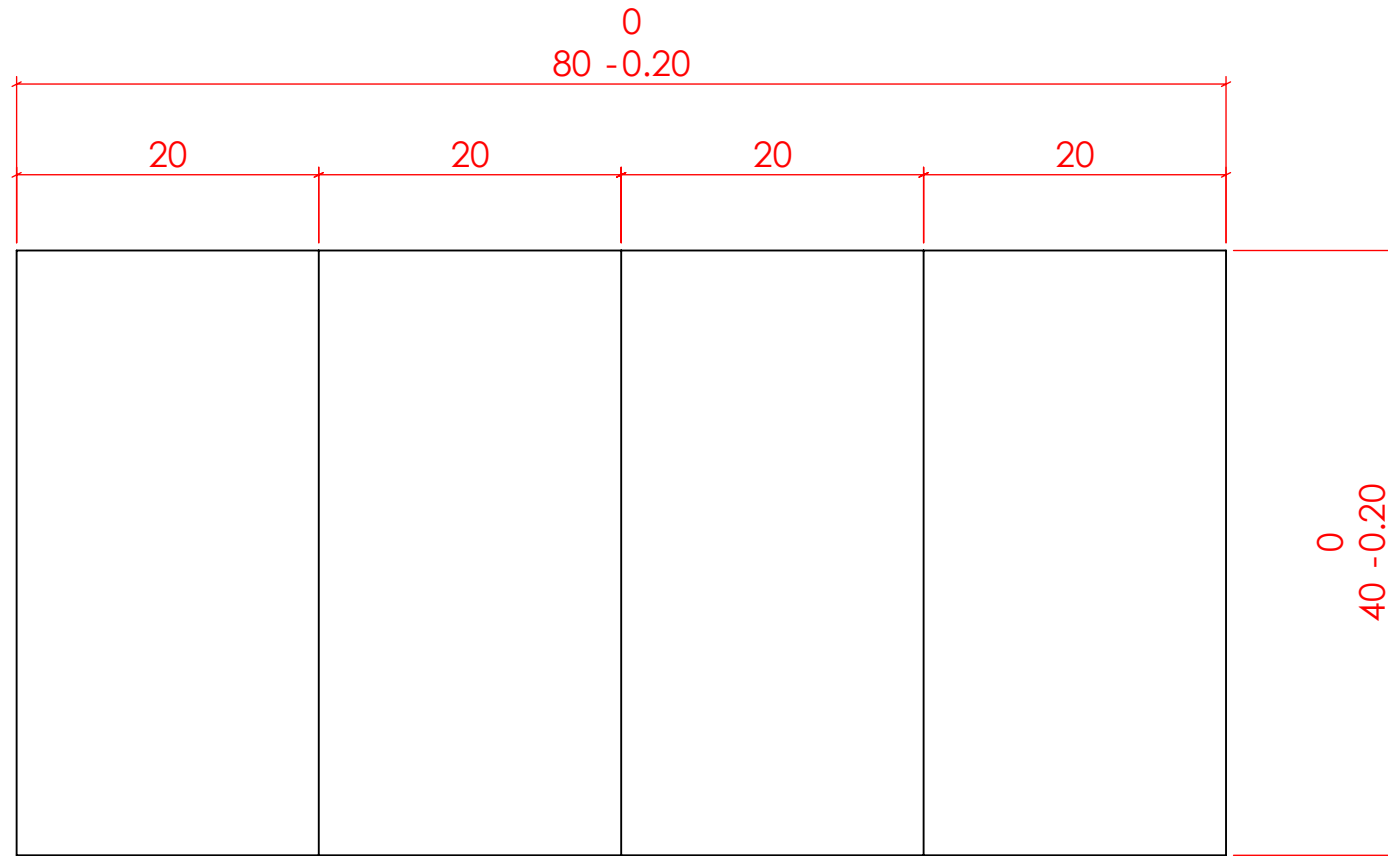
TOLERANCE +/- 0.1mm UNLESS OTHERWISE STATED.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH: N7. SCRATCH FREE.		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION A.	
SURFACE FINISH:		DRAWN: ACW.		DATE: 28-02-11.		TITLE: TEST PIECE BASE PLATE.		DWG NO. NTP0019	
TOLERANCES:									
LINEAR:									
ANGULAR:									
MATERIAL: 5mm BLACK CAST ACRYLIC.		WEIGHT:		SCALE:1:2		SHEET 1 OF 1		A3	



TOLERANCE +/- 0.05mm UNLESS OTHERWISE STATED.

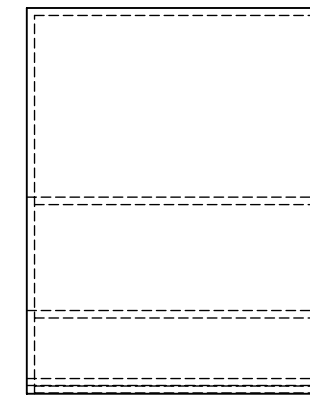
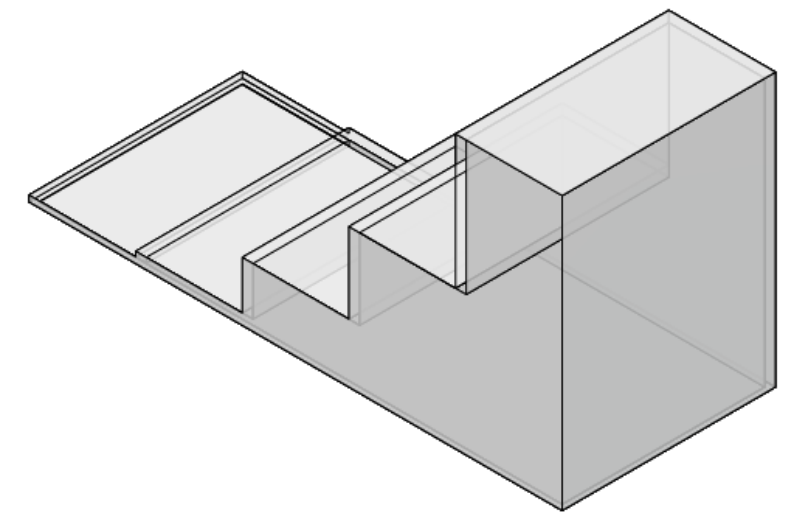
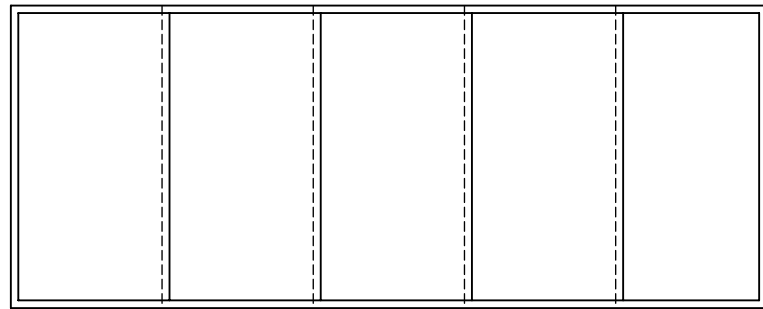
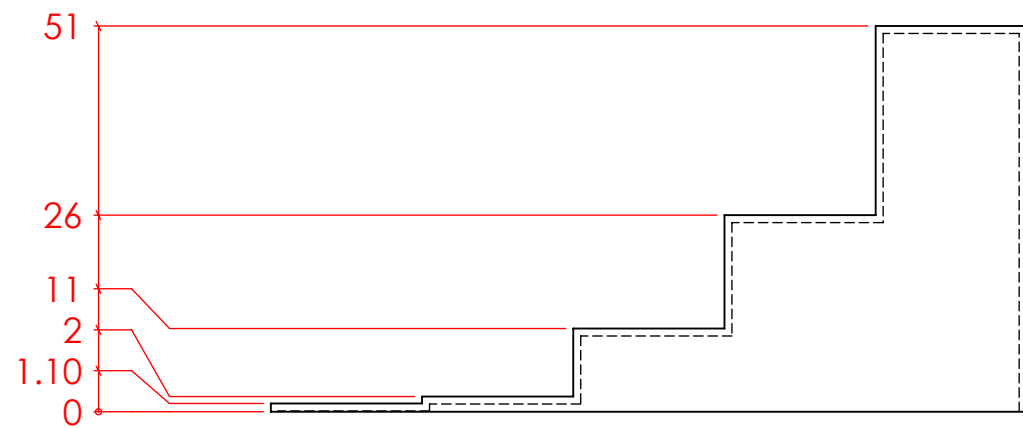
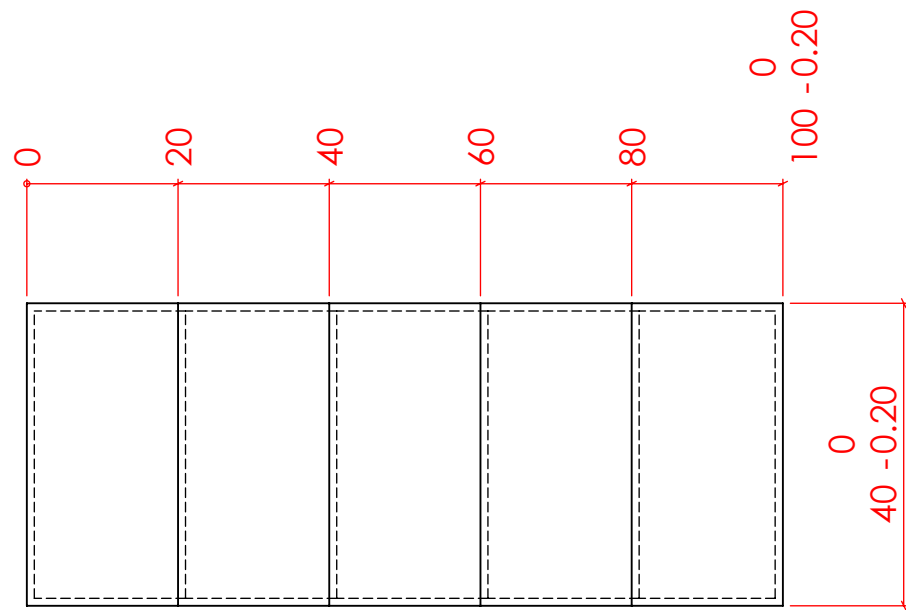
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH: N7. SCRATCH FREE.		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION A.	
SURFACE FINISH:		DRAWN ACW.		DATE 08-03-11.		TITLE: CBRNE-E&W-NEW TEST PIECE.		PTFE STEP WEDGE.	
TOLERANCES: LINEAR: ANGULAR:									
MFG		APPV'D		MATERIAL: VIRGIN PTFE TO EN ISO13000-1(1997).		DWG NO. NTP0020		A3	
Q.A		NAME		SIGNATURE		SCALE:1:1		SHEET 1 OF 1	



STEP 1 = 6 LAYERS OF STEEL SHIM.
 STEP 2 = 9 LAYERS OF STEEL SHIM.
 STEP 3 = 12 LAYERS OF STEEL SHIM.
 STEP 4 = 15 LAYERS OF STEEL SHIM.

TOLERANCE +/- 0.1mm UNLESS OTHERWISE STATED.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH: N7.		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION A.	
SURFACE FINISH:						TITLE: CBRNE-E&W-NEW TEST PIECE.			
TOLERANCES:						TITLE: STEEL SHIM STEP WEDGE.			
LINEAR:						DRAWN ACW.		DATE 08-03-11.	
ANGULAR:						CHK'D			
						APPV'D			
						MFG			
						Q.A.			
				MATERIAL: 0.05mm STEEL SHIM.		DWG NO. NTP0021		A3	
				WEIGHT:		SCALE:1:1		SHEET 1 OF 1	

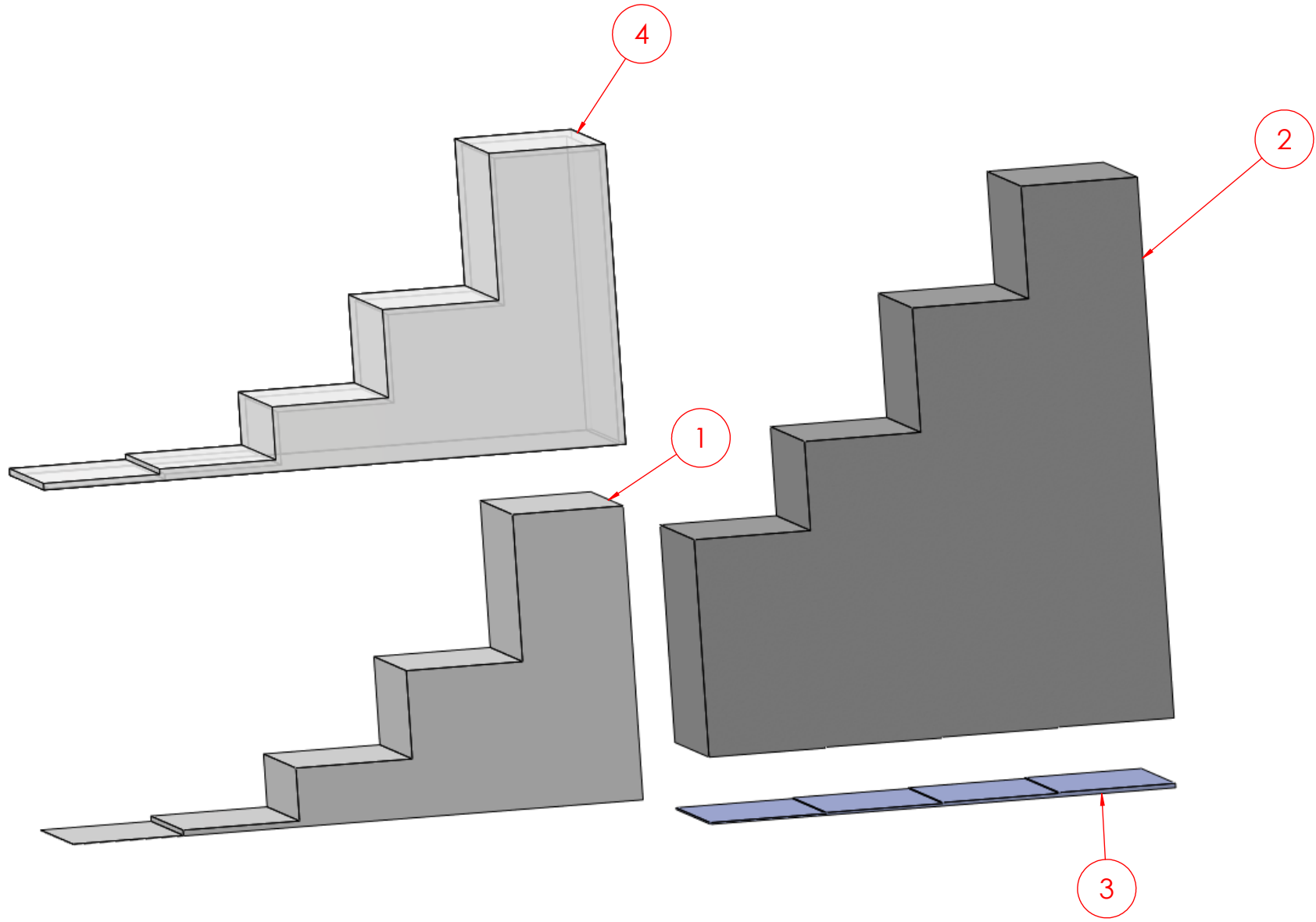


FABRICATE USING 1mm THICK CLEAR ACRYLIC OR POLYCARBONATE SHEET.
BOND TOGETHER WITH SUITABLE ADHESIVE / CEMENT.

TOLERANCE +/- 0.1mm.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH: N7. SCRATCH FREE.		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION A.	
SURFACE FINISH:						TITLE:		CBRNE-E&W-NEW TEST PIECE.	
TOLERANCES:						DRAWN ACW.		PAPER STEPS HOUSING.	
LINEAR:						CHK'D			
ANGULAR:						APPV'D			
						MFG			
						Q.A.			
				MATERIAL:		DWG NO.		NTP0022	
				1mm ACRYLIC / POLYCARBONATE.		SCALE:1:1		A3	
				WEIGHT:		SHEET 1 OF 1			

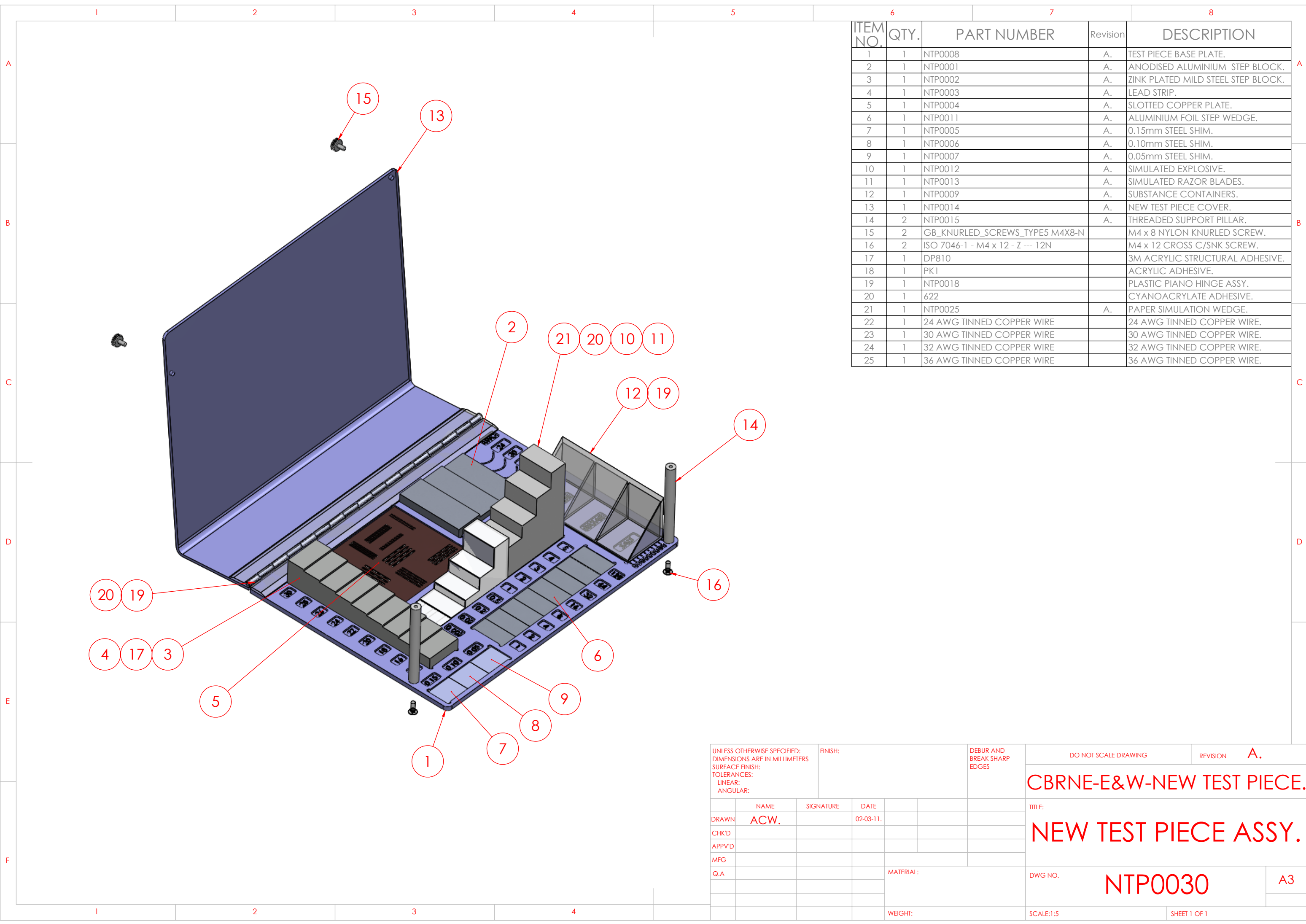
ITEM NO.	QTY.	PART NUMBER	Revision	DESCRIPTION
1	1	NTP0010	A.	PAPER STEP WEDGE.
2	1	NTP0020	A.	PTFE STEP WEDGE.
3	1	NTP0021	A.	STEEL SHIM STEP WEDGE.
4	1	NTP0022	A.	PAPER STEPS HOUSING.



STICK THE OVERSIZED BOTTOM SHEET OF PAPER TO THE BOTTOM OF ITEM 4 USING A SUITABLE ADHESIVE AND TRIM OFF EXCESS WHEN DRY.

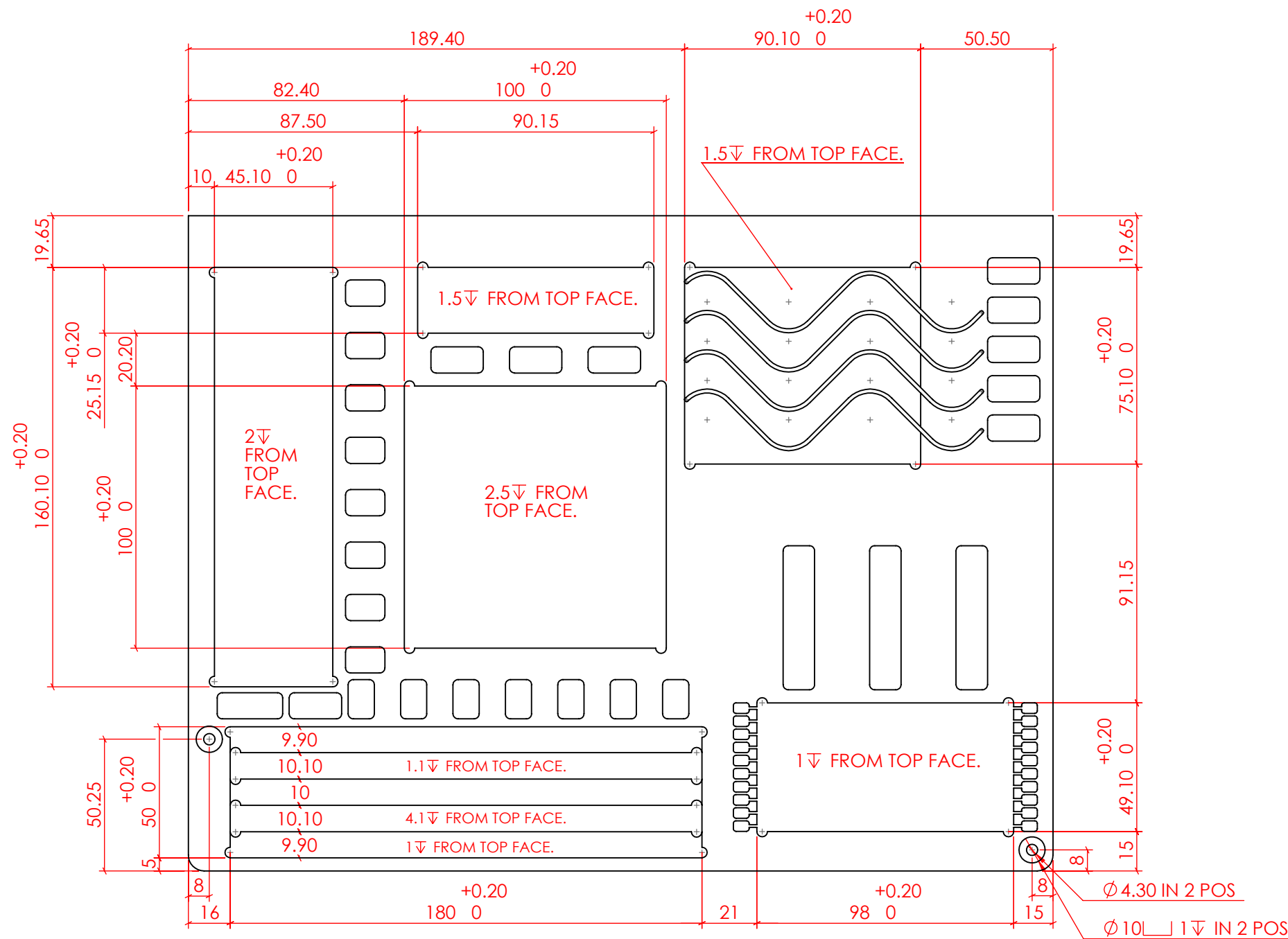
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SURFACE FINISH:						TITLE:		CBRNE-E&W-NEW TEST PIECE.	
TOLERANCES:						DRAWN		ACW.	
LINEAR:						CHK'D			
ANGULAR:						APPV'D			
						MFG			
						Q.A.			
						MATERIAL:		DWG NO. NTP0025	
						WEIGHT:		SCALE:1:2	
								SHEET 1 OF 1	

A3



ITEM NO.	QTY.	PART NUMBER	Revision	DESCRIPTION
1	1	NTP0008	A.	TEST PIECE BASE PLATE.
2	1	NTP0001	A.	ANODISED ALUMINIUM STEP BLOCK.
3	1	NTP0002	A.	ZINK PLATED MILD STEEL STEP BLOCK.
4	1	NTP0003	A.	LEAD STRIP.
5	1	NTP0004	A.	SLOTTED COPPER PLATE.
6	1	NTP0011	A.	ALUMINIUM FOIL STEP WEDGE.
7	1	NTP0005	A.	0.15mm STEEL SHIM.
8	1	NTP0006	A.	0.10mm STEEL SHIM.
9	1	NTP0007	A.	0.05mm STEEL SHIM.
10	1	NTP0012	A.	SIMULATED EXPLOSIVE.
11	1	NTP0013	A.	SIMULATED RAZOR BLADES.
12	1	NTP0009	A.	SUBSTANCE CONTAINERS.
13	1	NTP0014	A.	NEW TEST PIECE COVER.
14	2	NTP0015	A.	THREADED SUPPORT PILLAR.
15	2	GB_KNURLED_SCREWS_TYPE5 M4X8-N		M4 x 8 NYLON KNURLED SCREW.
16	2	ISO 7046-1 - M4 x 12 - Z --- 12N		M4 x 12 CROSS C/SNK SCREW.
17	1	DP810		3M ACRYLIC STRUCTURAL ADHESIVE.
18	1	PK1		ACRYLIC ADHESIVE.
19	1	NTP0018		PLASTIC PIANO HINGE ASSY.
20	1	622		CYANOACRYLATE ADHESIVE.
21	1	NTP0025	A.	PAPER SIMULATION WEDGE.
22	1	24 AWG TINNED COPPER WIRE		24 AWG TINNED COPPER WIRE.
23	1	30 AWG TINNED COPPER WIRE		30 AWG TINNED COPPER WIRE.
24	1	32 AWG TINNED COPPER WIRE		32 AWG TINNED COPPER WIRE.
25	1	36 AWG TINNED COPPER WIRE		36 AWG TINNED COPPER WIRE.

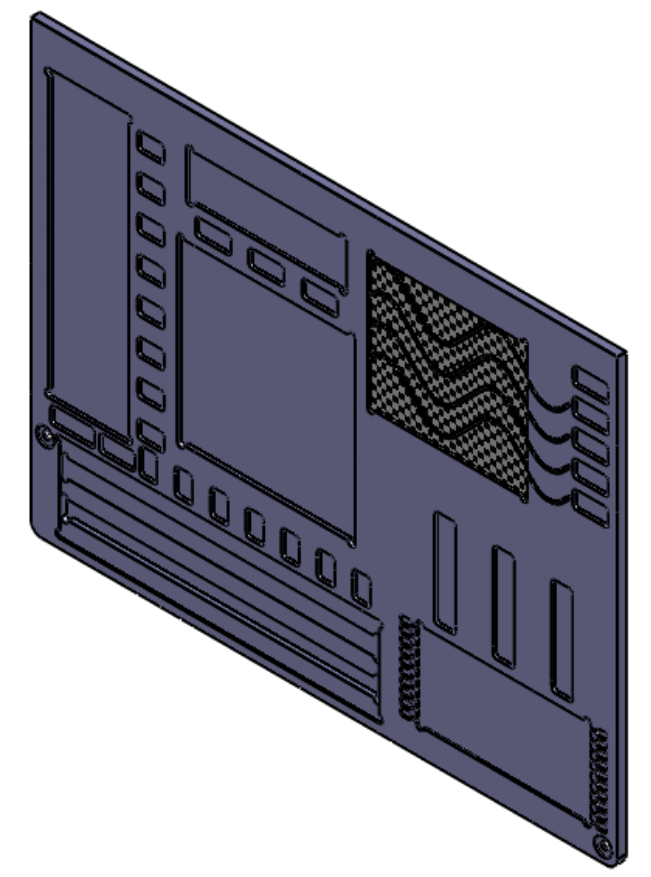
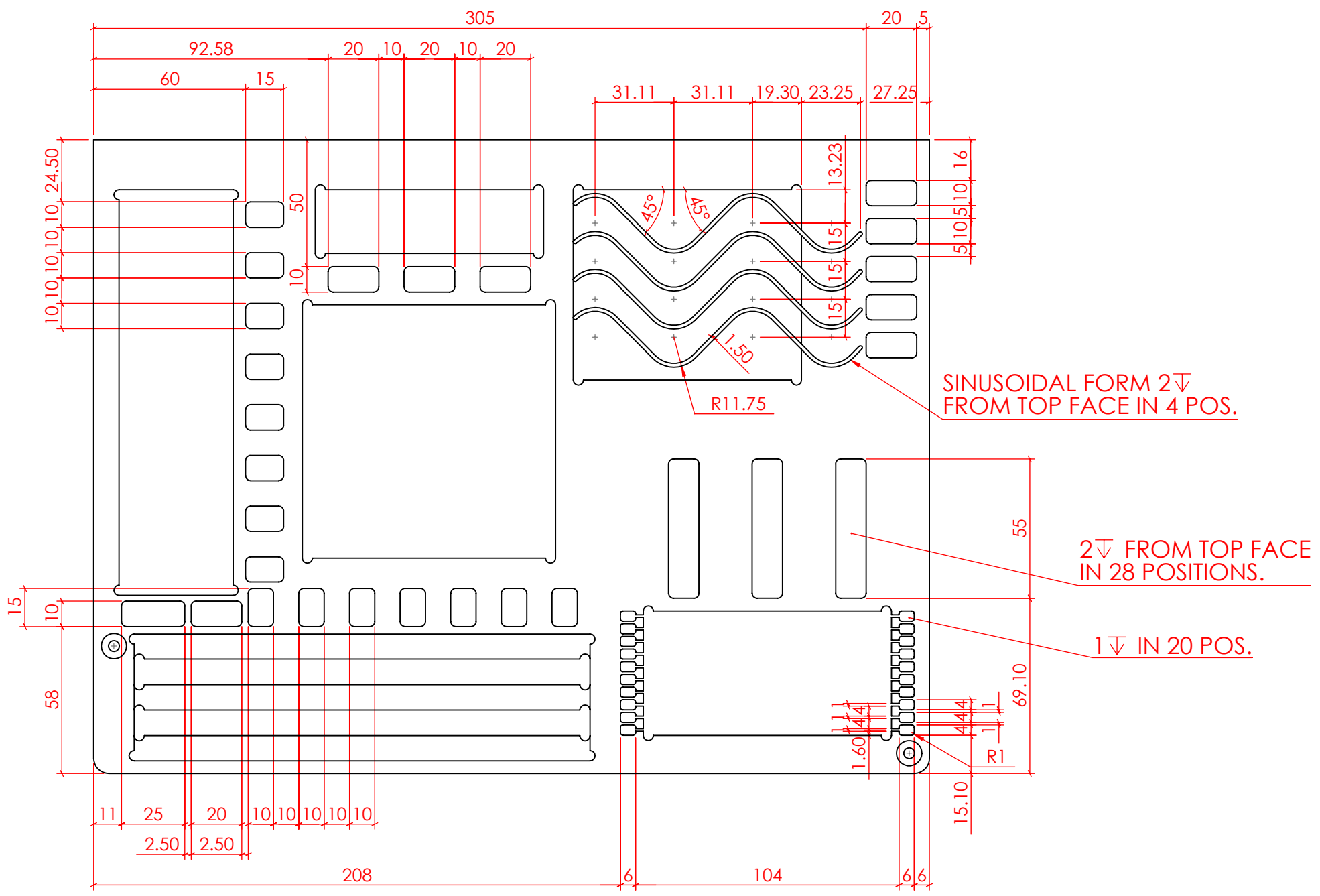
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH:		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION A.	
SURFACE FINISH:									
TOLERANCES:									
LINEAR:									
ANGULAR:									
DRAWN ACW.		SIGNATURE		DATE		TITLE:			
CHK'D				02-03-11.		CBRNE-E&W-NEW TEST PIECE.			
APPV'D						NEW TEST PIECE ASSY.			
MFG						DWG NO.			
Q.A						NTP0030		A3	
						SCALE:1:5		SHEET 1 OF 1	
						WEIGHT:			



ALL TOOL OVERRUN AND CORNER RADII TO BE 2mm (Ø4) UNLESS OTHERWISE STATED.

TOLERANCE +/- 0.1mm UNLESS OTHERWISE STATED.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:		FINISH: N7. SCRATCH FREE.		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION A.	
						CBRNE-E&W-NEW TEST PIECE.			
						TEST PIECE BASE PLATE.			
						MATERIAL: 5mm BLACK CAST ACRYLIC.		DWG NO. NTP0031	
						WEIGHT:		SCALE:1:2	
						SHEET 1 OF 3		A3	

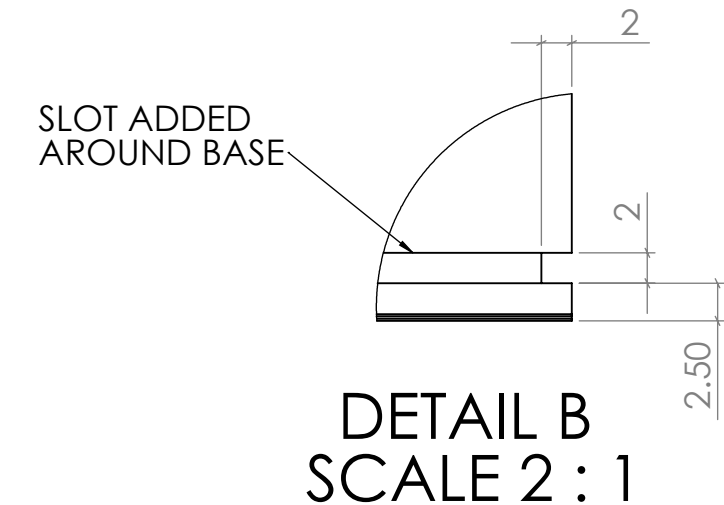
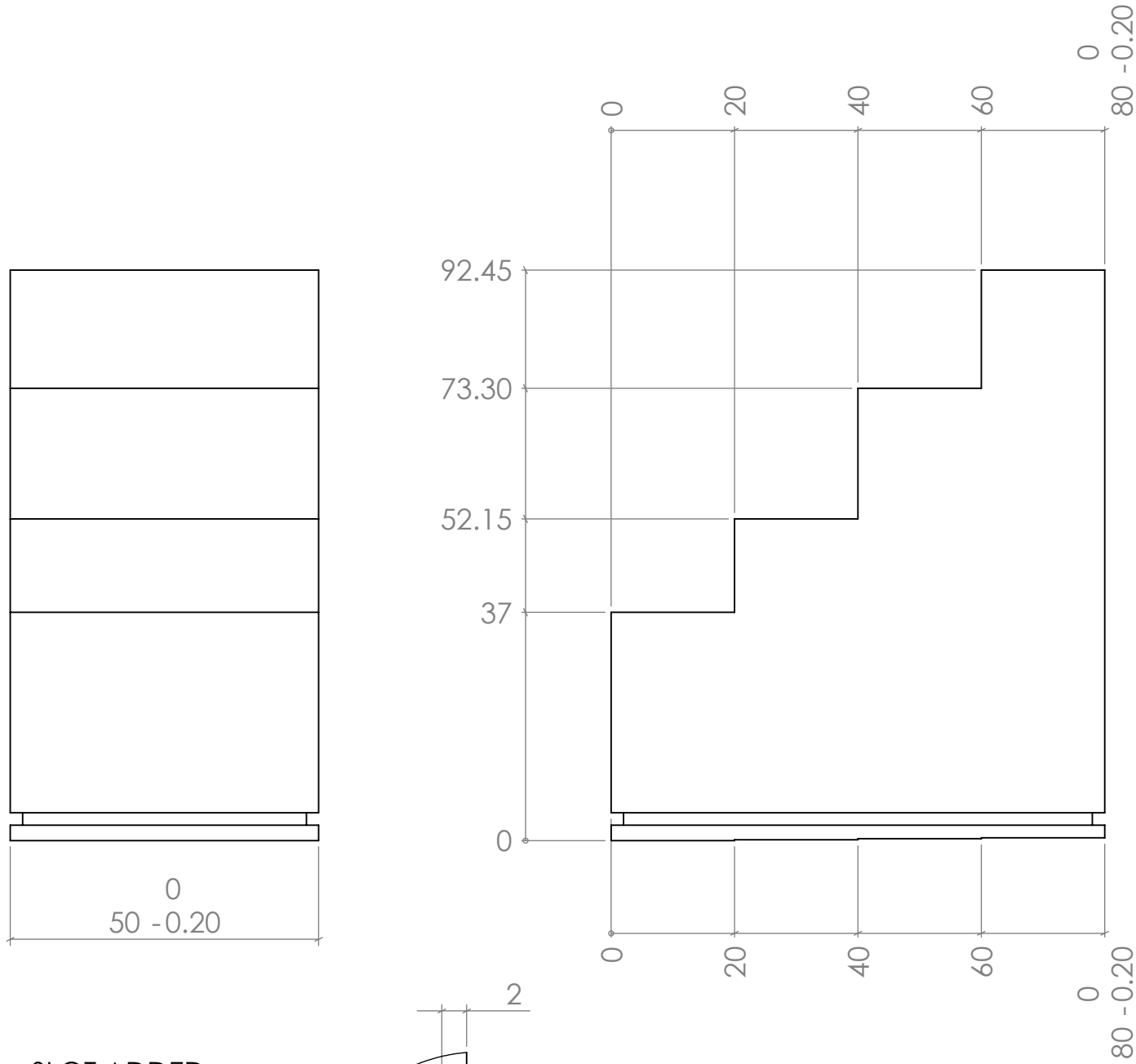


ALL TOOL OVERRUN AND CORNER RADII TO BE 2mm (Ø4) UNLESS OTHERWISE STATED.

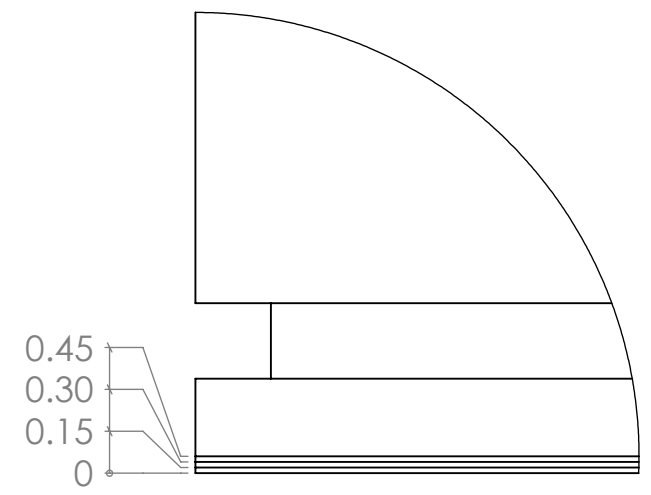
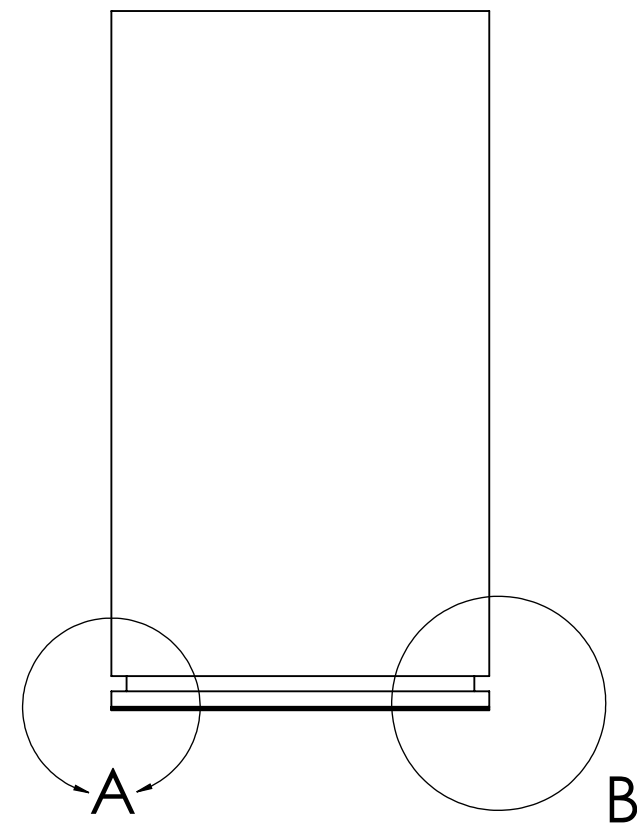
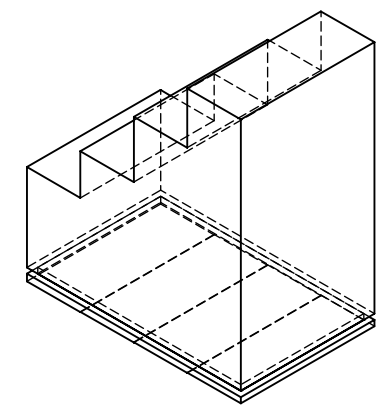
TOLERANCE +/- 0.1mm UNLESS OTHERWISE STATED.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH: N7. SCRATCH FREE.		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION A.	
SURFACE FINISH:						CBRNE-E&W-NEW TEST PIECE.			
TOLERANCES:						TITLE:		TEST PIECE BASE PLATE.	
LINEAR:									
ANGULAR:									
NAME	SIGNATURE	DATE				MATERIAL:		DWG NO.	
DRAWN ACW.		25-05-11.				5mm BLACK CAST ACRYLIC.		NTP0031	
CHK'D								A3	
APPV'D									
MFG									
Q.A						WEIGHT:		SCALE:1:2	
								SHEET 2 OF 3	

REVISIONS				
REV	REF	DESCRIPTION	DATE	APPROVED
B		2MM WIDE SLOT ADDED AROUND BASE	11/12/12	RJW



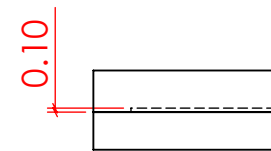
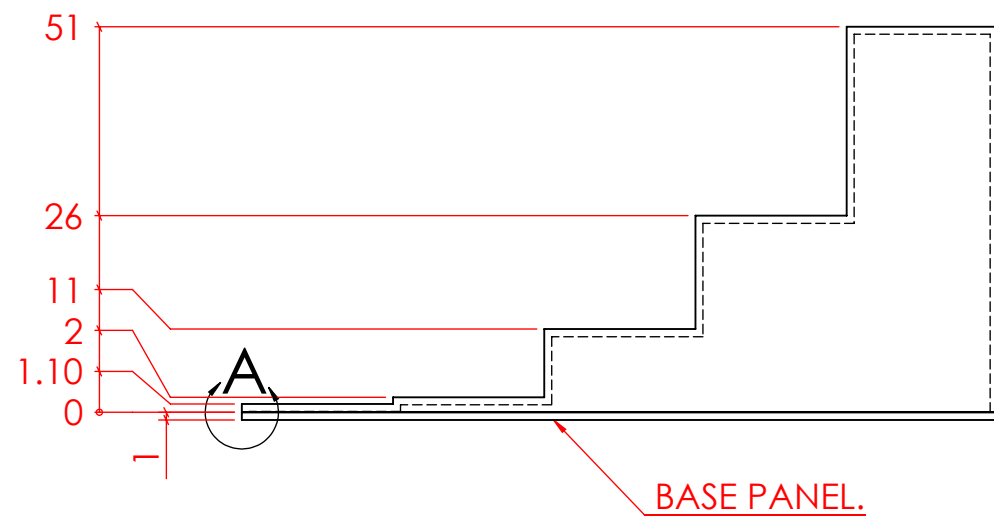
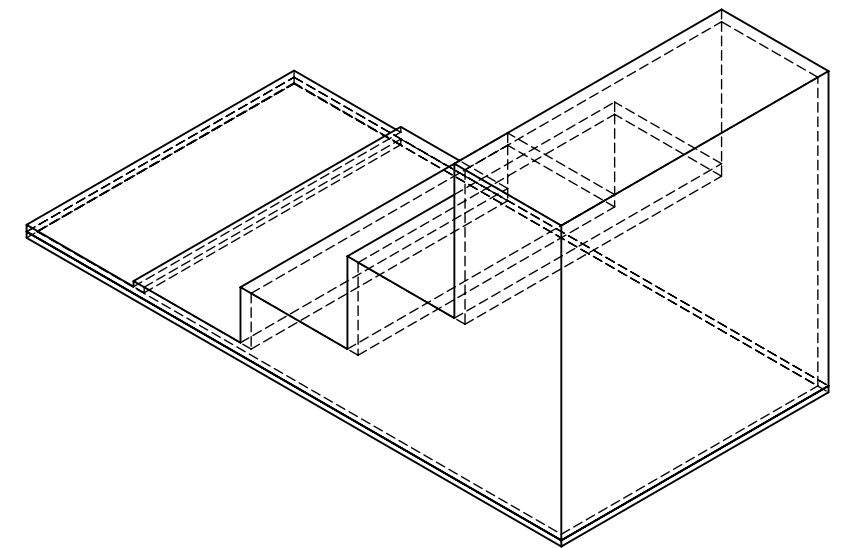
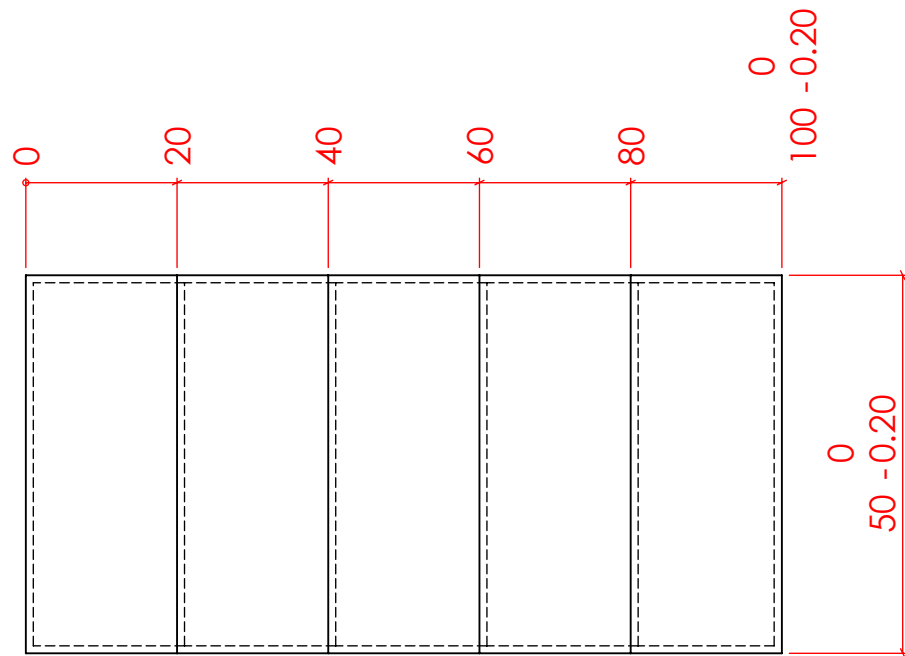
**DETAIL B
SCALE 2 : 1**



**DETAIL A
SCALE 5 : 1**

TOLERANCE +/- 0.05mm UNLESS OTHERWISE STATED.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH: N7. SCRATCH FREE.		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION B	
SURFACE FINISH:						TITLE:		CBRNE-E&W-NEW TEST PIECE.	
TOLERANCES:						DRAWN		ACW.	
LINEAR:						CHK'D			
ANGULAR:						APPV'D			
						MFG			
						Q.A			
				MATERIAL: VIRGIN PTFE TO EN ISO13000-1(1997).		DWG NO.		NTP0032	
				WEIGHT:		SCALE:1:1		SHEET 1 OF 1	

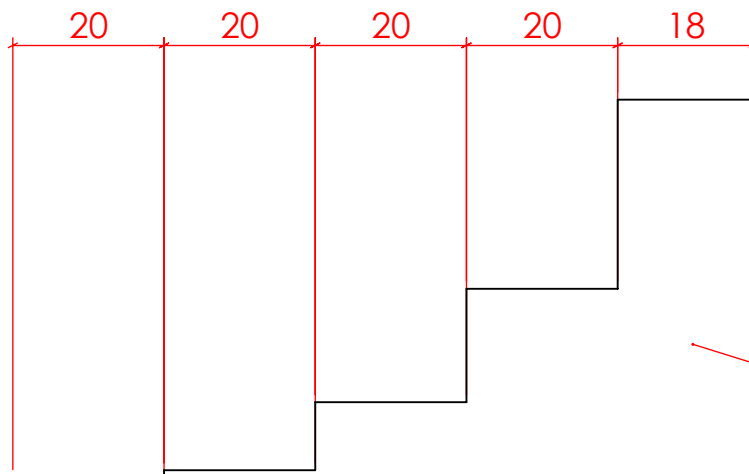
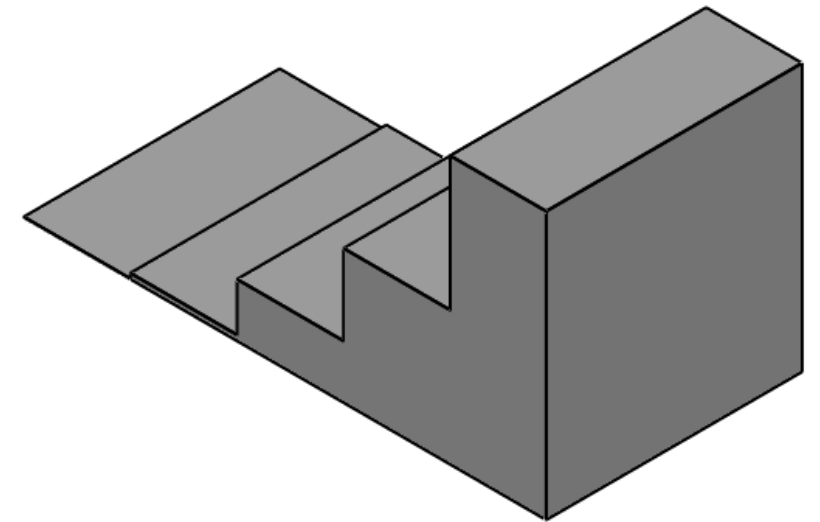
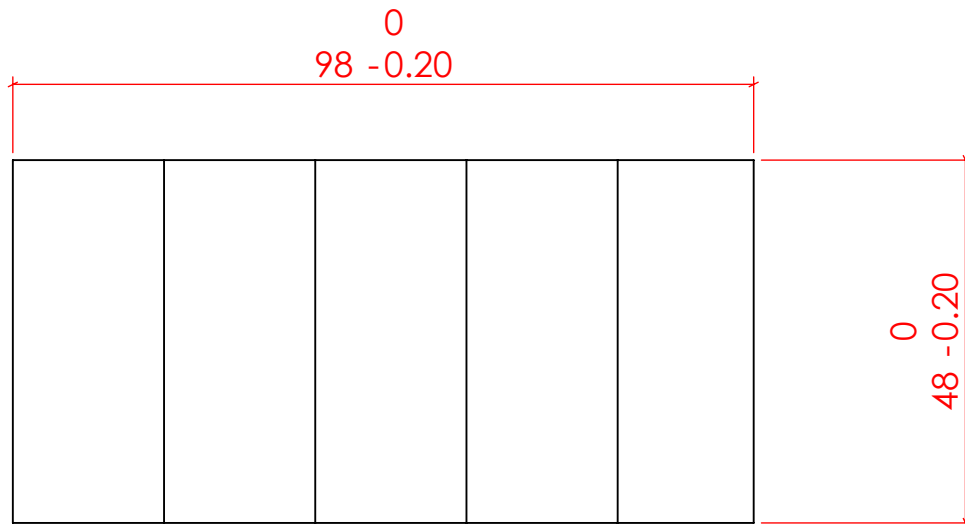


DETAIL A
SCALE 5 : 1

TOLERANCE +/- 0.1mm.

FABRICATE USING 1mm THICK CLEAR ACRYLIC OR POLYCARBONATE SHEET.
BOND TOGETHER WITH SUITABLE ADHESIVE / CEMENT.
SECURE BASE PANEL AFTER INSERTION OF PAPER STEP WEDGE.

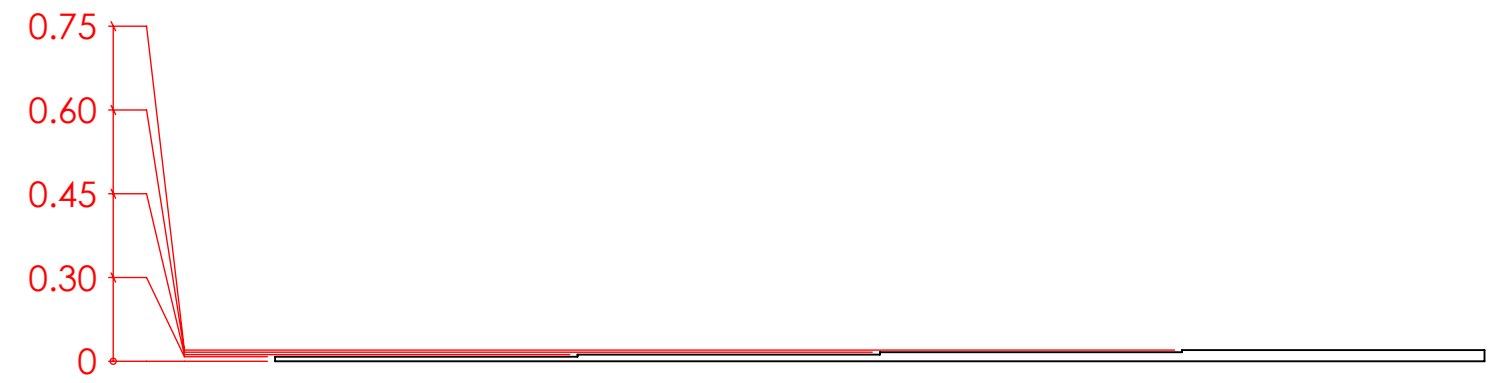
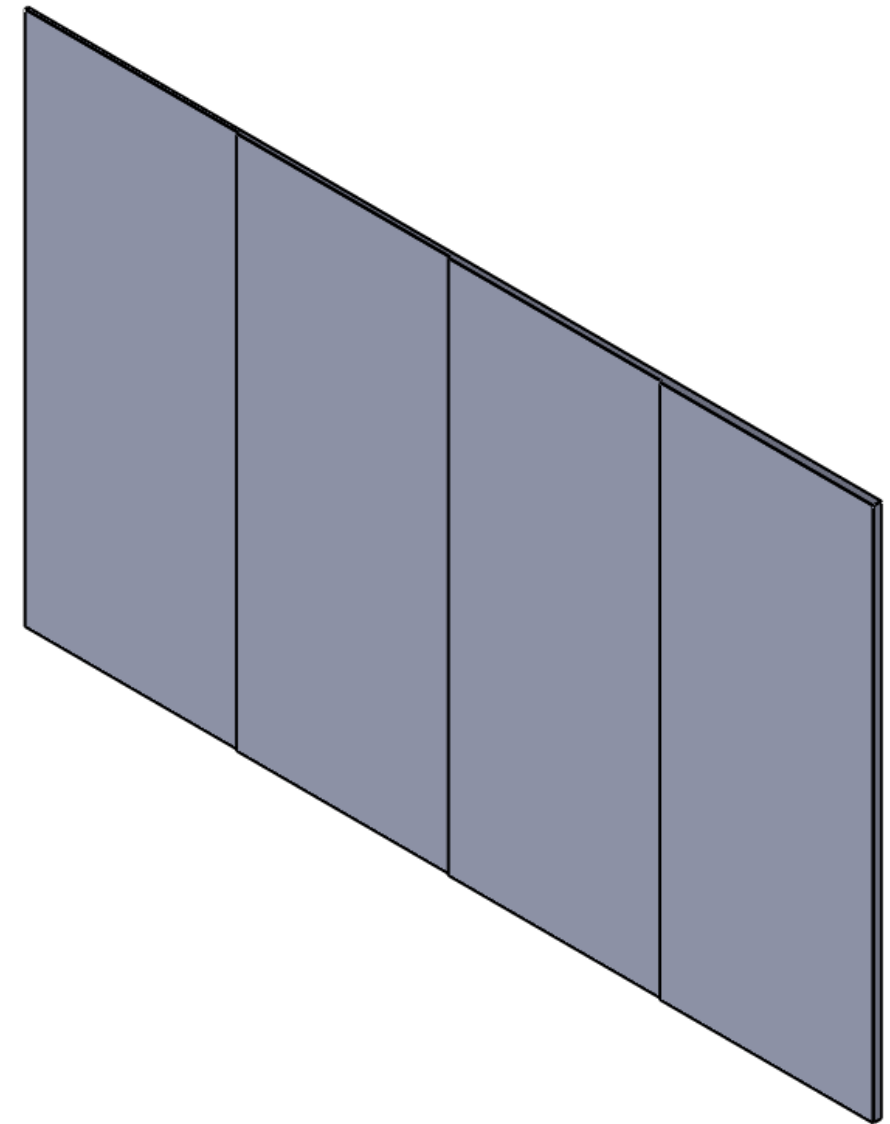
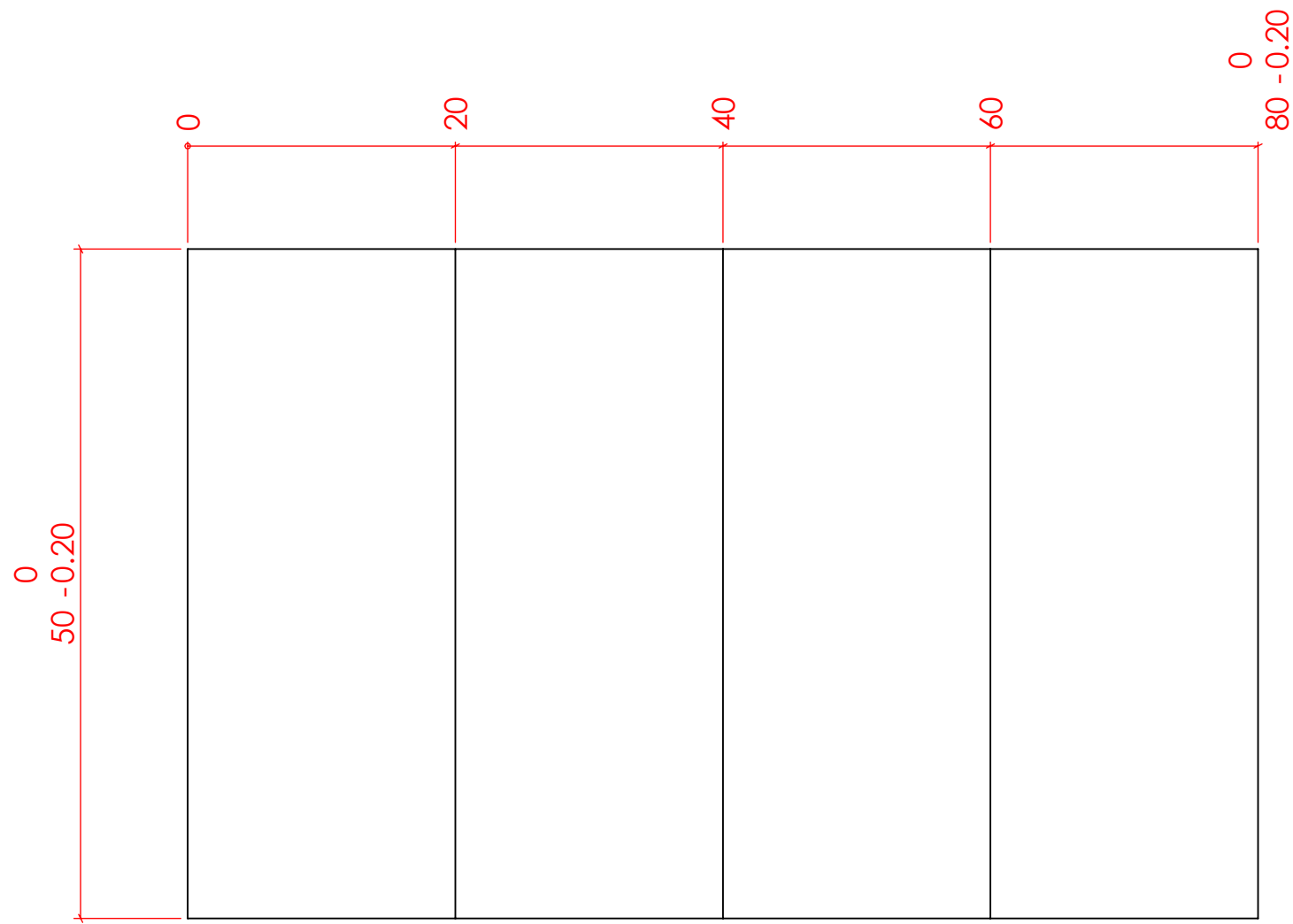
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH: N7. SCRATCH FREE.		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION A.	
SURFACE FINISH:						TITLE:		CBRNE-E&W-NEW TEST PIECE.	
TOLERANCES:						DRAWN		PAPER STEPS HOUSING.	
LINEAR:						CHK'D			
ANGULAR:						APPV'D			
						MFG			
						Q.A			
				MATERIAL:		DWG NO.		NTP0033	
				1mm ACRYLIC / POLYCARBONATE.		SCALE:1:1		A3	
				WEIGHT:		SHEET 1 OF 1			



STEP 1 = 1 SHEET OF PAPER.
 STEP 2 = 10 SHEETS OF PAPER.
 STEP 3 = 100 SHEETS OF PAPER.
 STEP 4 = 250 SHEETS OF PAPER.
 STEP 5 = 500 SHEETS OF PAPER.

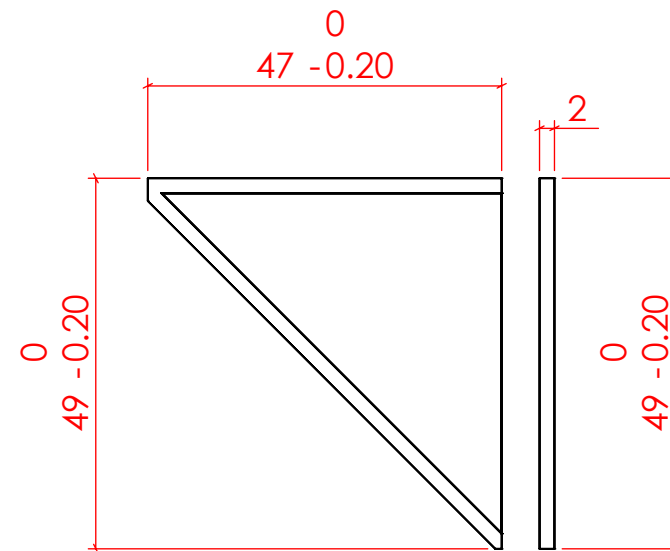
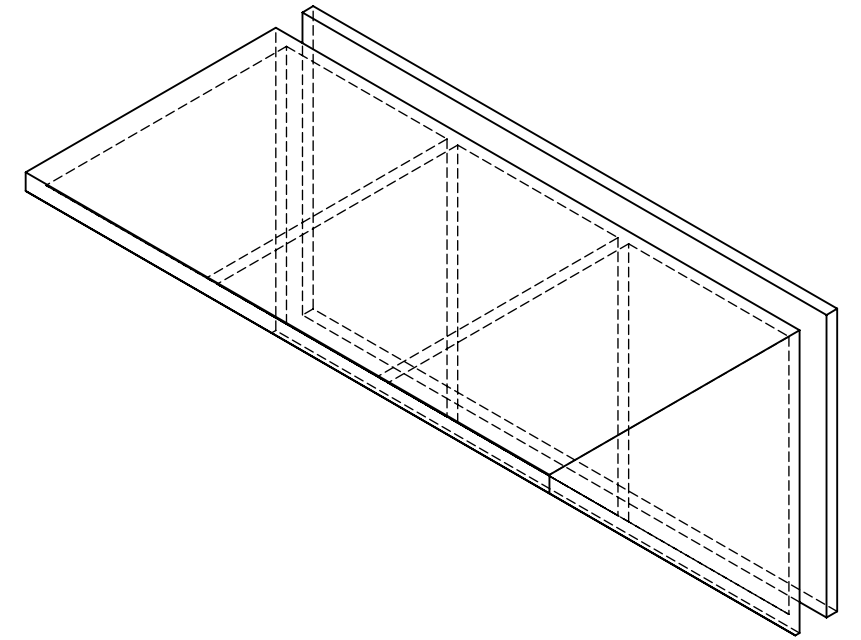
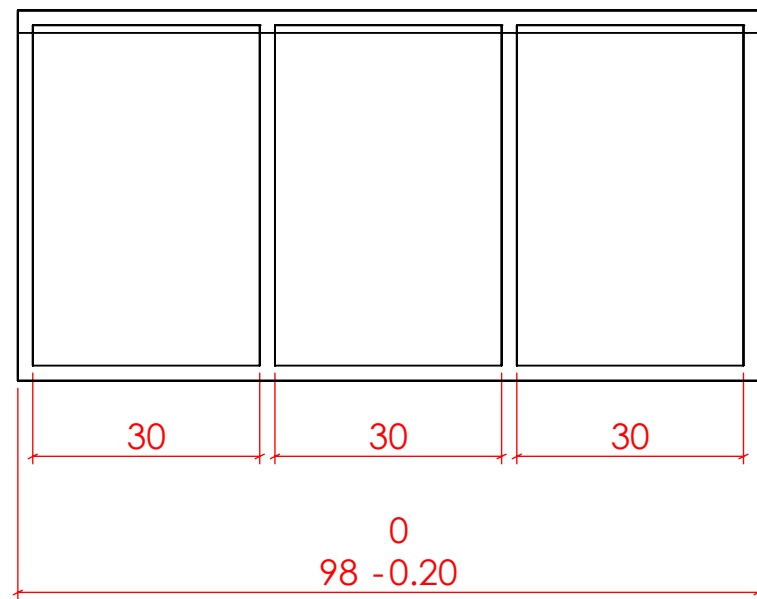
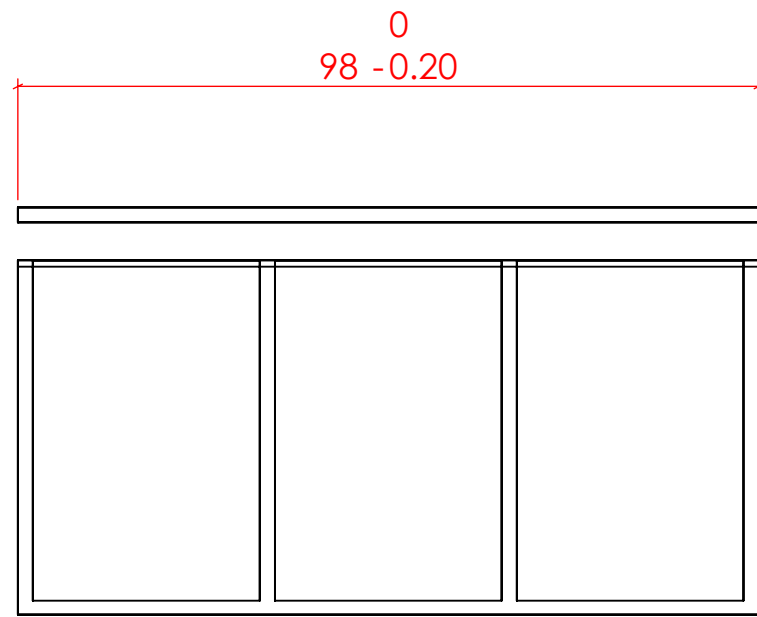
TOLERANCE +/- 0.1mm UNLESS OTHERWISE STATED.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH: WRINKLE FREE.		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION A.	
SURFACE FINISH:									
TOLERANCES:									
LINEAR:									
ANGULAR:									
DRAWN ACW.		SIGNATURE		DATE 02-06-11.		TITLE:			
CHK'D						PAPER STEP WEDGE.			
APPV'D									
MFG									
Q.A						MATERIAL: STANDARD PRINTING PAPER 80gsm 0.1mm THICK.		DWG NO. NTP0034	
						WEIGHT:		SCALE:1:1	
								SHEET 1 OF 1	
								A3	



TOLERANCE +/- 0.1mm UNLESS OTHERWISE STATED.

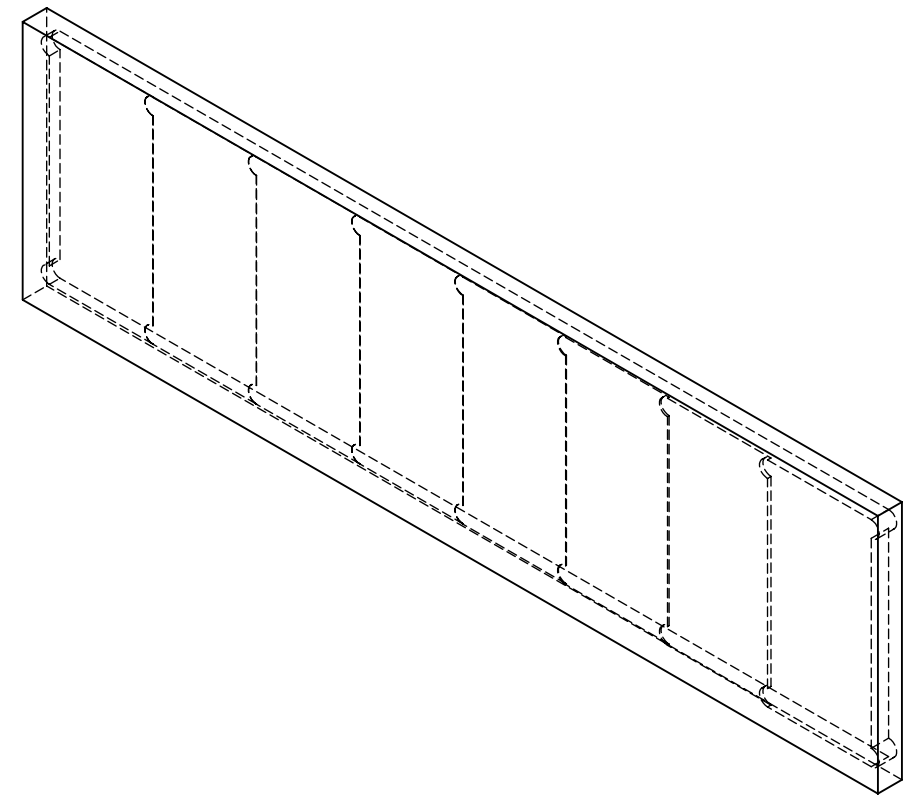
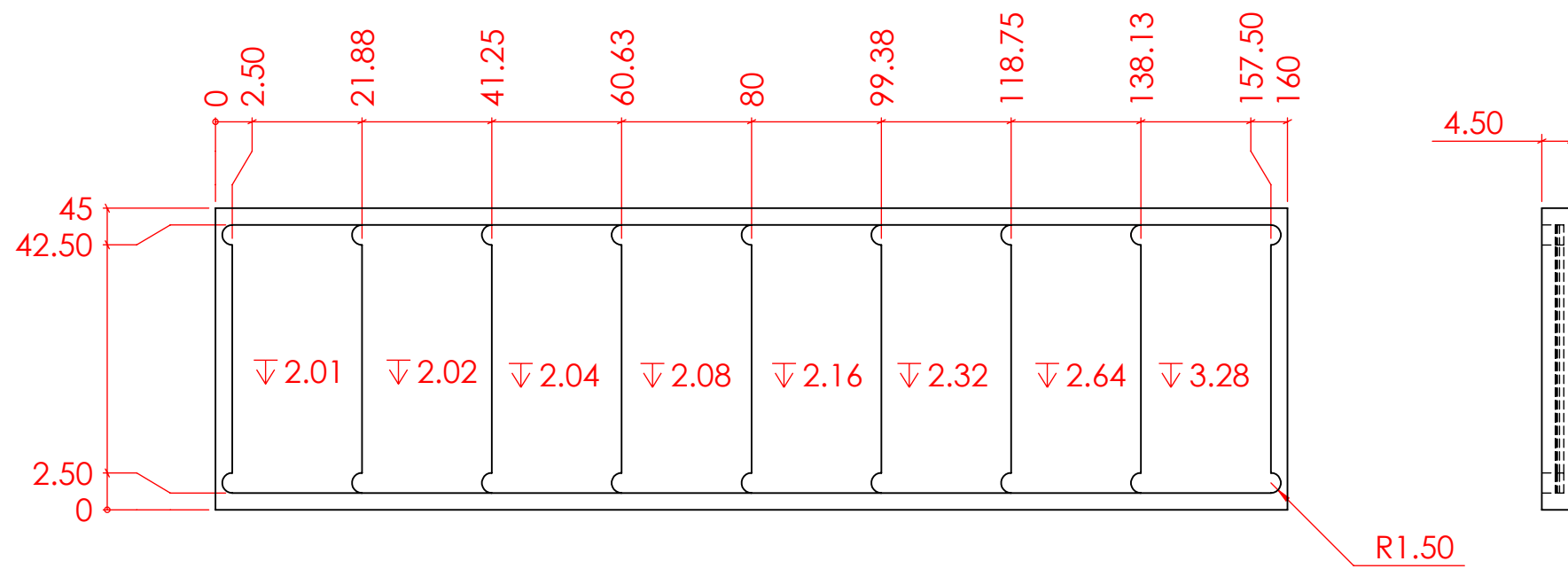
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH: N7.		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION A.	
SURFACE FINISH:						TITLE: STEEL SHIM STEP WEDGE.			
TOLERANCES:						DRAWN ACW.		DATE 01-06-11.	
LINEAR:						CHK'D			
ANGULAR:						APPV'D			
						MFG			
						Q.A.			
				MATERIAL: 0.05mm STEEL SHIM.		DWG NO. NTP0035		A3	
				WEIGHT:		SCALE:1:1		SHEET 1 OF 1	



FABRICATE FROM 2mm THICK CLEAR ACRYLIC OR POLYCARBONATE SHEET.
 BOND TOGETHER WITH SUITABLE ADHESIVE / CEMENT.
 COVER PANEL TO BE SEALED AFTER INSERTION OF POWDER SUBSTANCES.

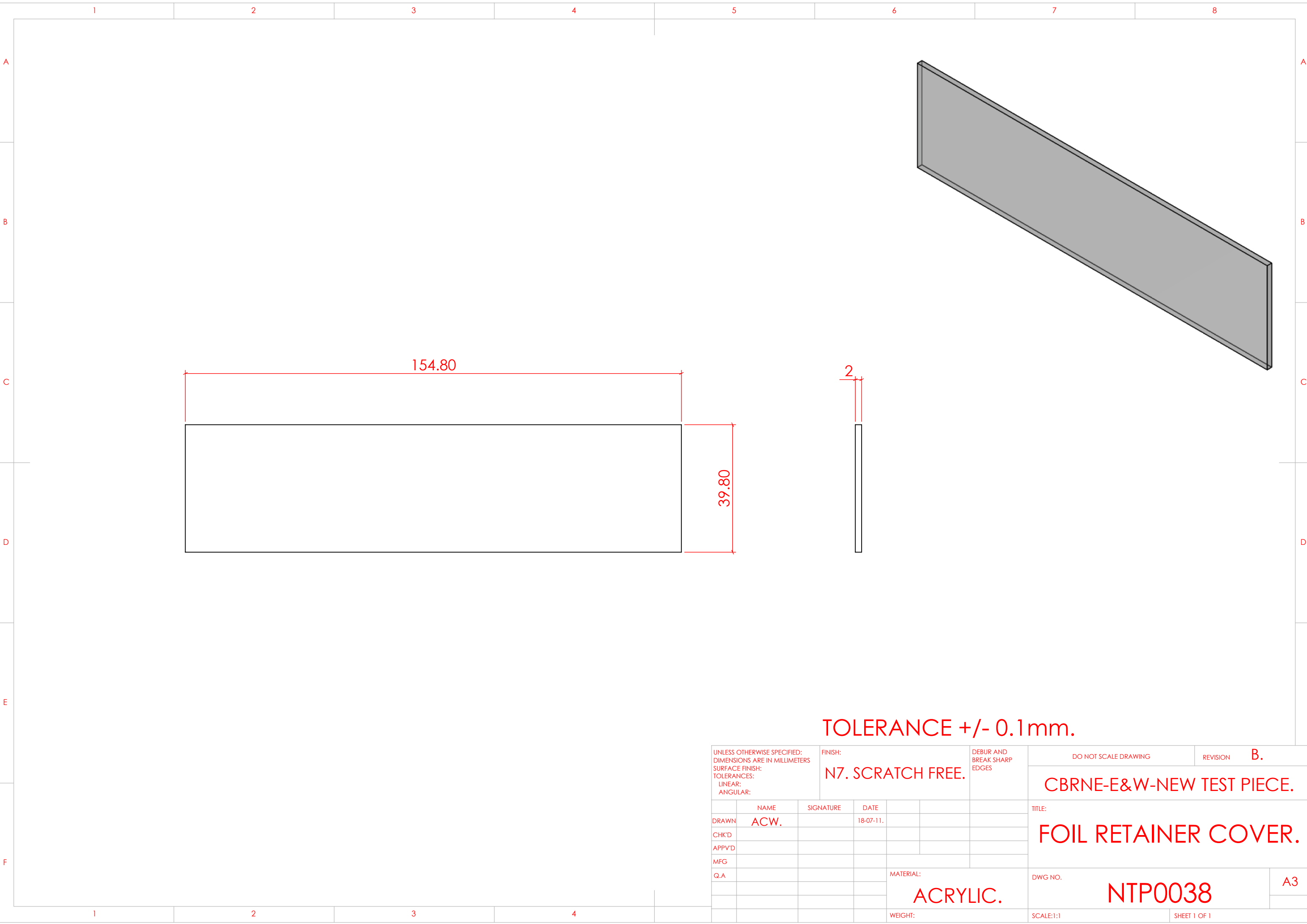
TOLERANCE +/- 0.1mm UNLESS OTHERWISE STATED.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH: SCRATCH FREE.		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION A.	
SURFACE FINISH:								CBRNE-E&W-NEW TEST PIECE.	
TOLERANCES:								TITLE: SUBSTANCE CONTAINERS.	
LINEAR:									
ANGULAR:									
DRAWN ACW.		SIGNATURE		DATE 02-06-11.		MATERIAL:		DWG NO. NTP0036	
CHK'D						2mm CLEAR ACRYLIC OR POLYCARBONATE SHEET.		SCALE:1:1	
APPV'D						WEIGHT:		SHEET 1 OF 1	
MFG								A3	
Q.A									



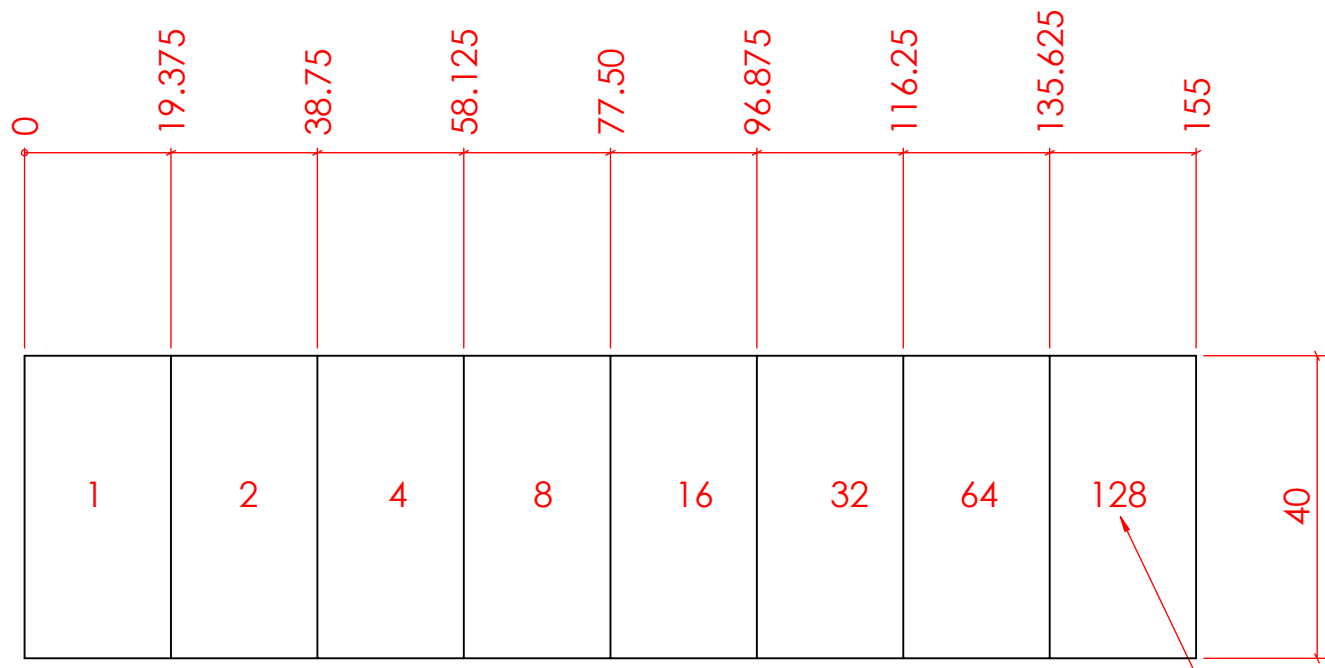
TOLERANCE +/- 0.1mm.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH: N7. SCRATCH FREE.		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION B.	
SURFACE FINISH:								TITLE: CBRNE-E&W-NEW TEST PIECE.	
TOLERANCES:								FOIL RETAINER BODY.	
LINEAR:								DWG NO. NTP0037	
ANGULAR:								A3	
DRAWN ACW.		SIGNATURE		DATE 18-07-11.		MATERIAL: ACRYLIC.		SCALE:1:1	
CHK'D						WEIGHT:		SHEET 1 OF 1	
APPV'D									
MFG									
Q.A									

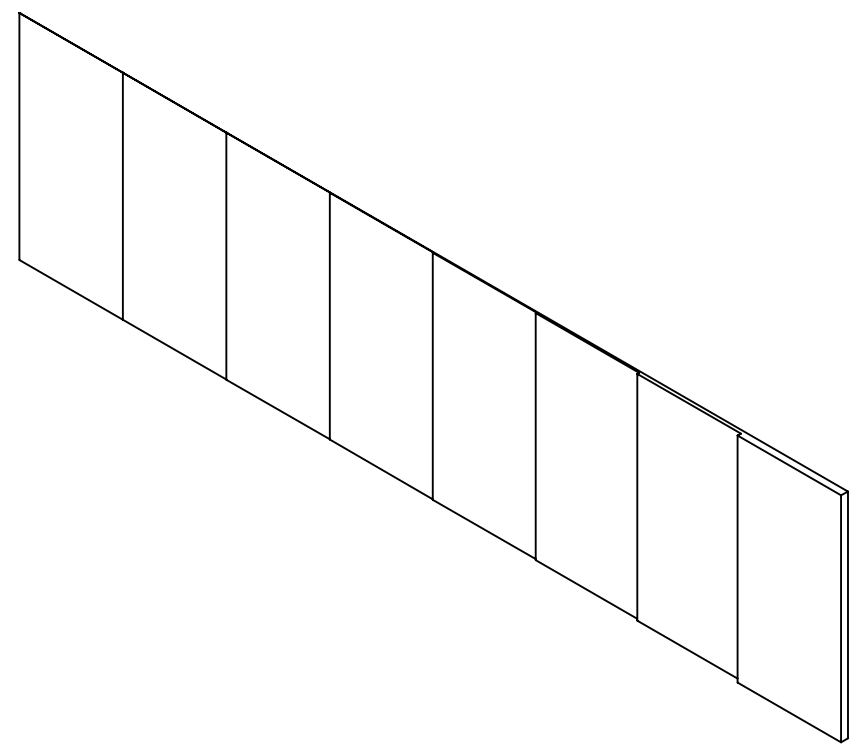


TOLERANCE +/- 0.1mm.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH: N7. SCRATCH FREE.		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION B.	
SURFACE FINISH:		DATE		TITLE:		CBRNE-E&W-NEW TEST PIECE.			
TOLERANCES:		DRAWN ACW.		18-07-11.		FOIL RETAINER COVER.			
LINEAR:		CHK'D							
ANGULAR:		APPV'D							
		MFG				MATERIAL:		DWG NO.	
		Q.A				ACRYLIC.		NTP0038	
						WEIGHT:		SCALE:1:1	
								SHEET 1 OF 1	
								A3	



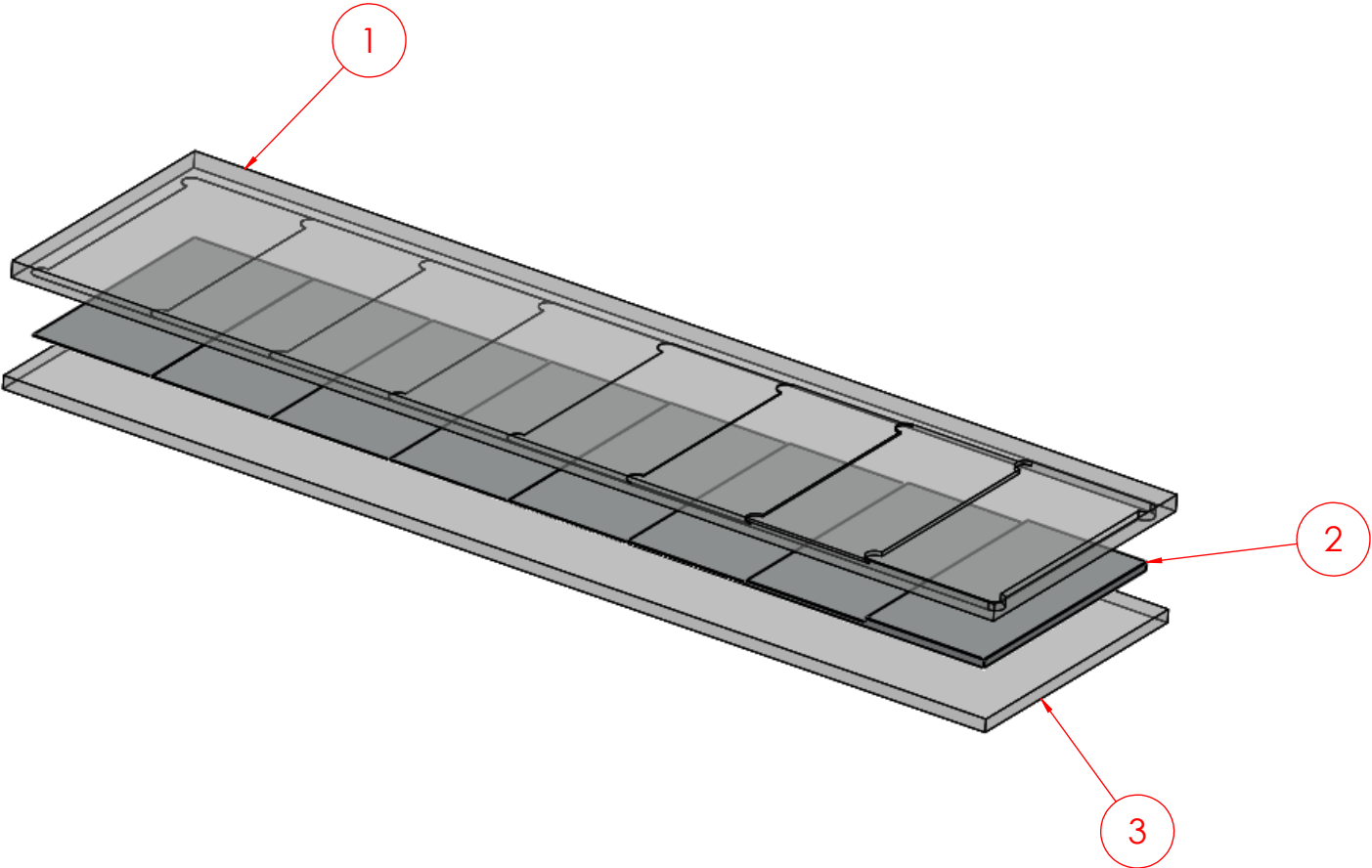
NUMBERS DENOTE THE No OF THICKNESSES OF 0.01mm ALUMINIUM FOIL IN EACH STEP.



TOLERANCE +/- 0.1mm.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH: SMOOTH.		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION A.	
SURFACE FINISH:						TITLE: CBRNE-E&W-NEW TEST PIECE.			
TOLERANCES:						TITLE: ALUMINIUM FOIL STEP WEDGE.			
LINEAR:						DRAWN ACW.		DATE 01-06-11.	
ANGULAR:						CHK'D			
						APPV'D			
						MFG			
						Q.A			
				MATERIAL: ALUMINIUM KITCHEN FOIL.		DWG NO. NTP0039		A3	
				WEIGHT:		SCALE:1:1		SHEET 1 OF 1	

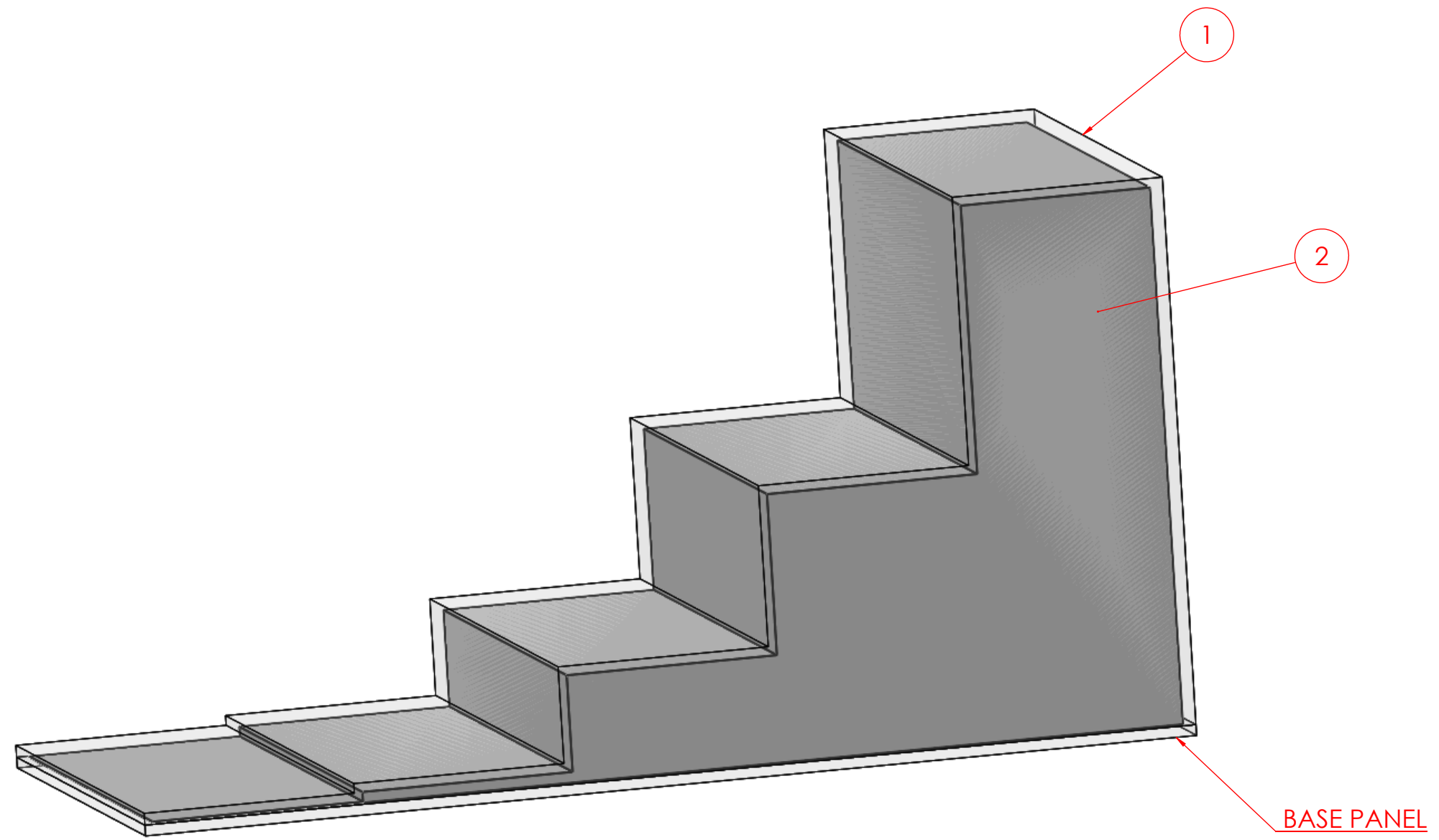
TEM NO.	QTY.	PART NUMBER	Revision	DESCRIPTION
1	1	NTP0037	A.	FOIL RETAINER BODY.
2	1	NTP0039	A.	ALUMINIUM FOIL STEP WEDGE.
3	1	NTP0038	A.	FOIL RETAINER COVER.



BOND TOGETHER ITEMS 1 & 3 AFTER ASSY WITH A SUITABLE ADHESIVE / CEMENT.

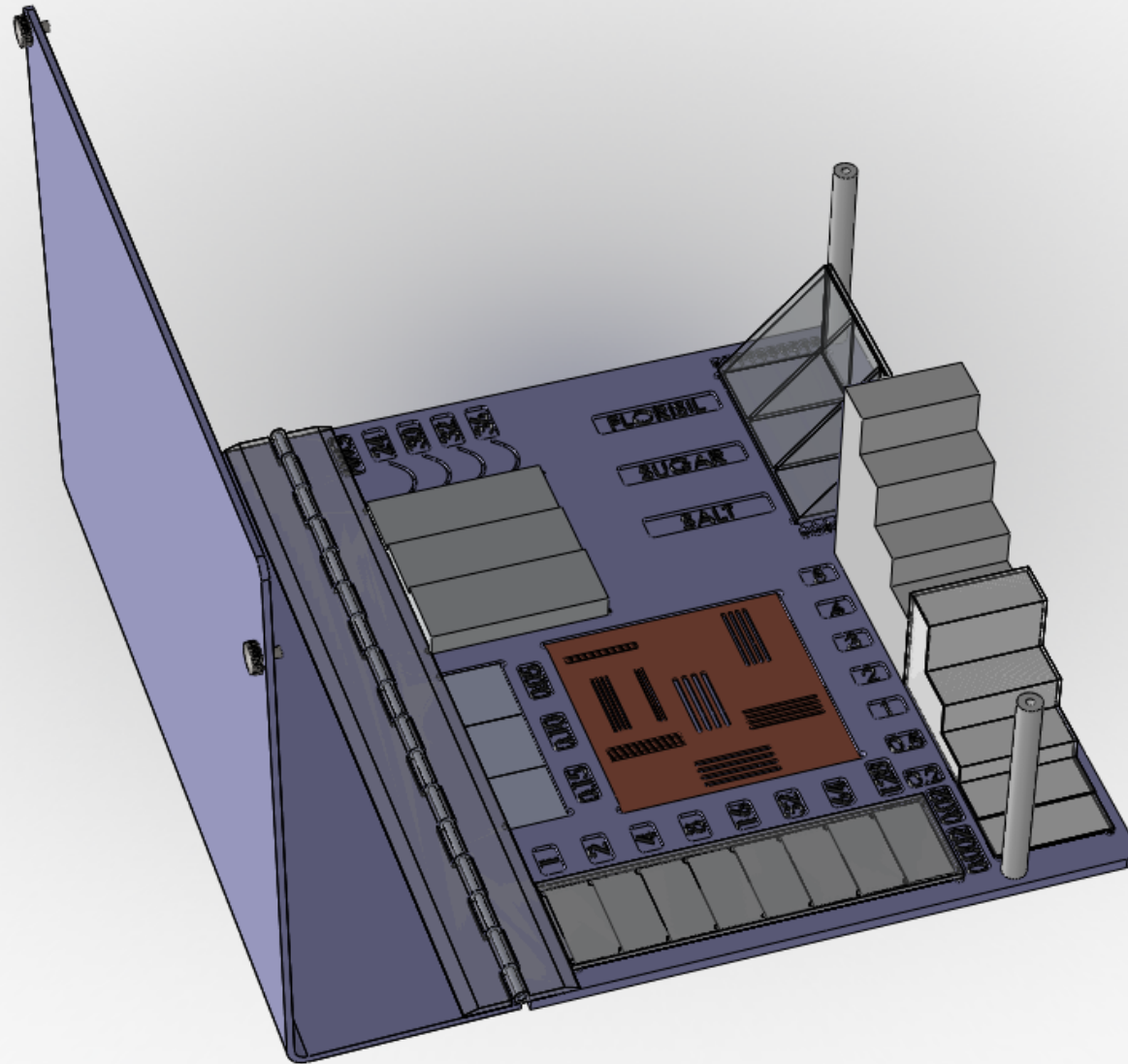
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH:		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION A.	
SURFACE FINISH:						TITLE:		CBRNE-E&W-NEW TEST PIECE.	
TOLERANCES:						DRAWN		ACW.	
LINEAR:						CHK'D			
ANGULAR:						APPV'D			
						MFG			
						Q.A.			
						MATERIAL:		DWG NO. NTP0040	
						WEIGHT:		SCALE:1:1	
								SHEET 1 OF 1	

ITEM NO.	QTY.	PART NUMBER	Revision	DESCRIPTION
1	1	NTP0033	A.	PAPER STEPS HOUSING.
2	1	NTP0034	A.	PAPER STEP WEDGE.

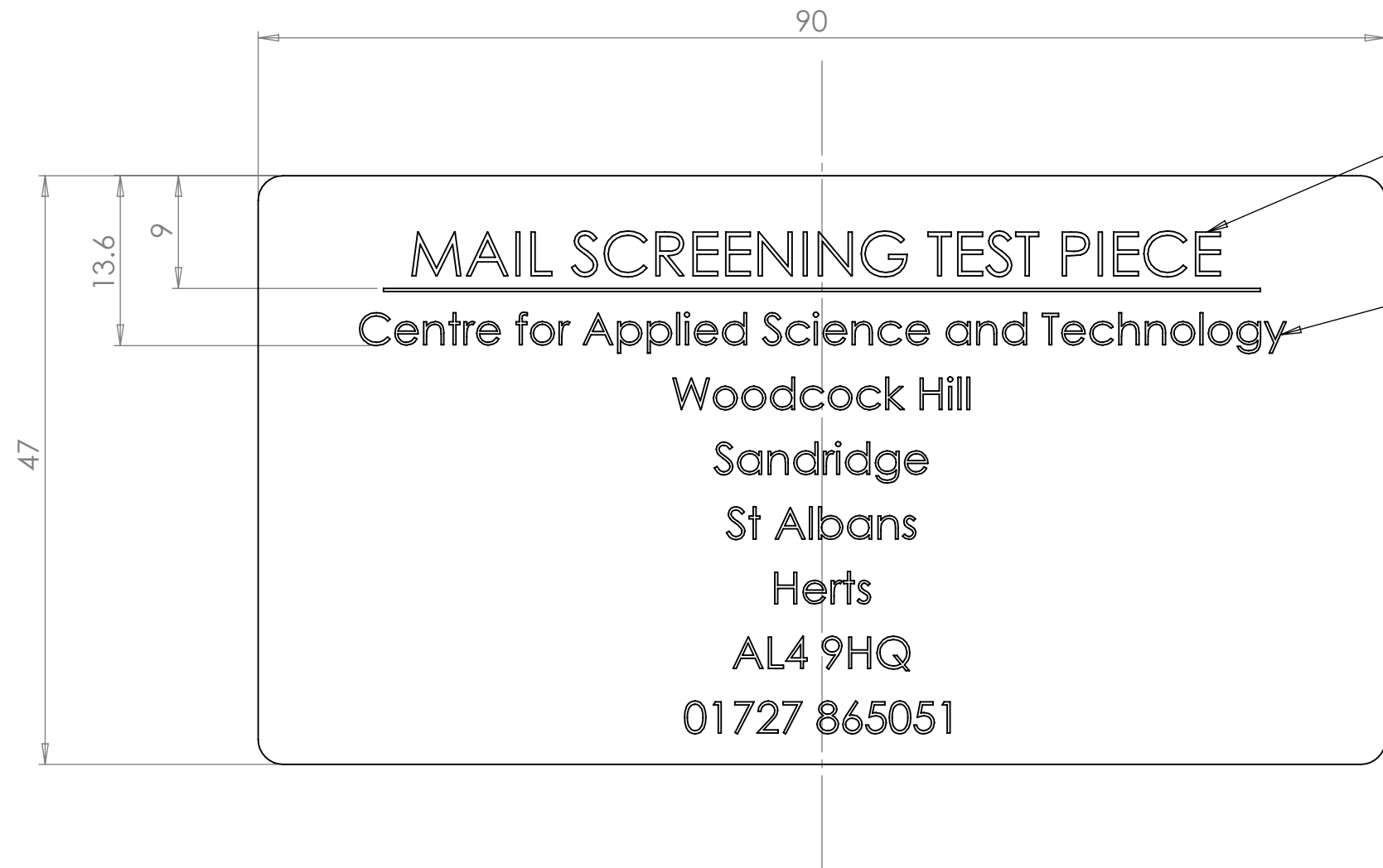


**BASE PANEL TO BE SECURED WITH SUITABLE ADHESIVE/
CEMENT AFTER INSERTION OF THE PAPER WEDGE.**

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH:		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION A.	
SURFACE FINISH:						TITLE:		CBRNE-E&W-NEW TEST PIECE.	
TOLERANCES:						DRAWN		ACW.	
LINEAR:						CHK'D			
ANGULAR:						APPV'D			
						MFG			
						Q.A			
						MATERIAL:		DWG NO. NTP0042	
						WEIGHT:		SCALE:1:1	
								SHEET 1 OF 1	
								A3	

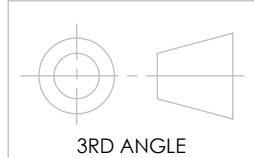
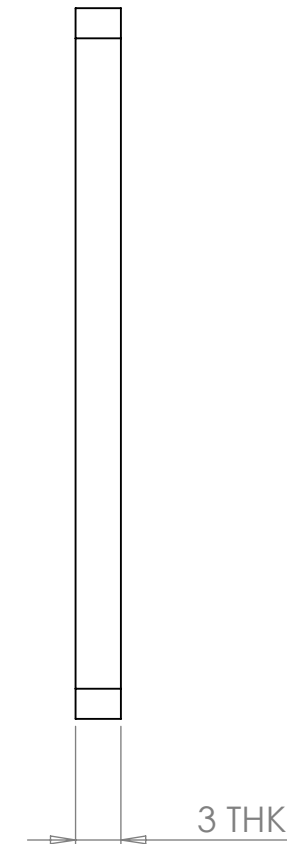


REVISIONS					
REV	REF	DESCRIPTION	DATE	APPROVED	
A	BS	NEW ISSUE	14/03/2013	RJW	




TEXT HEIGHT - 4MM
FONT - ARIAL

TEXT HEIGHT - 3MM
FONT - ARIAL

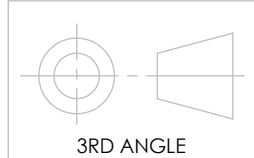
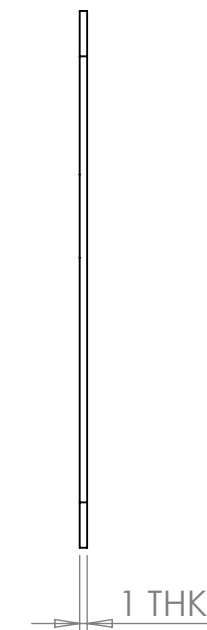
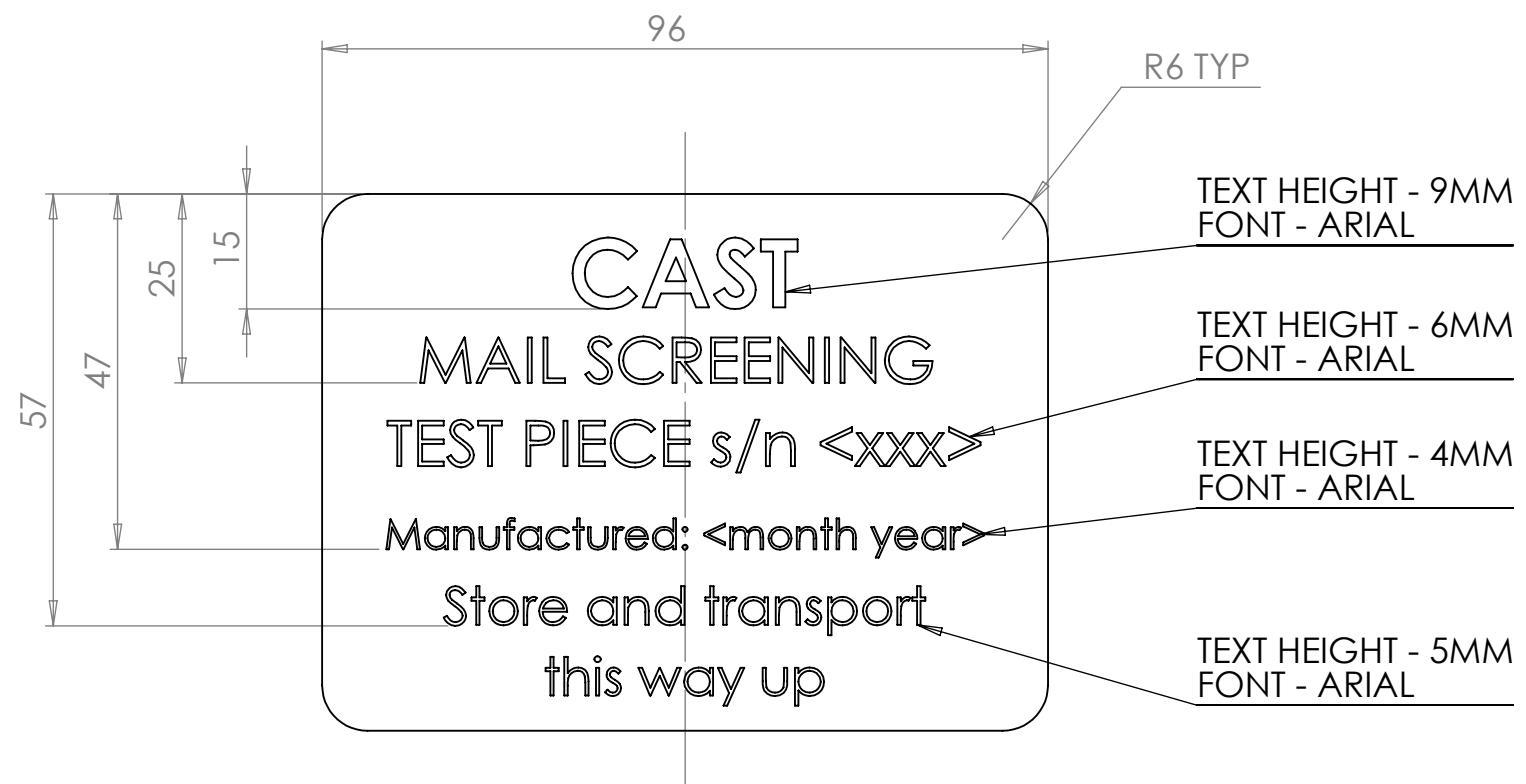


DO NOT SCALE DRAWING - DRAWN ON SOLIDWORKS
IF IN DOUBT ASK

- NOTES:-
- 1) LASER ENGRAVE PLATE
 - 2) MATERIAL - 3MM THK BLACK LASER ENGRAVING PLASTIC
 - 3) FIT PLATE TO INSIDE OF STORM CASE (REMOVE FOAM PACKING)


 HOME OFFICE Centre for Applied Science and Technology	UNLESS OTHERWISE SPECIFIED: 1. DIMENSIONS ARE IN MILLIMETERS 2. SURFACE FINISH: $\sqrt{1.6}$ 3. GENERAL TOLERANCES: ± 0.20 4. HOLES: ± 0.25 5. ANGLES: $\pm 0.25^\circ$ 6: DE-BURR ALL HOLES & SHARP EDGES		MATERIAL: SEE NOTES	FINISH: NATURAL												
	<table border="1"> <thead> <tr> <th></th> <th>NAME</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>DRAWN</td> <td>RJW</td> <td>14//03/2013</td> </tr> <tr> <td>MODELLED</td> <td>RJW</td> <td>14/03/2013</td> </tr> <tr> <td>CHECKED</td> <td>SG</td> <td>14/03/2013</td> </tr> </tbody> </table>			NAME	DATE	DRAWN	RJW	14//03/2013	MODELLED	RJW	14/03/2013	CHECKED	SG	14/03/2013	SECURITY: NOT PROTECTIVELY MARKED	WEIGHT: 12.64 g
		NAME	DATE													
	DRAWN	RJW	14//03/2013													
MODELLED	RJW	14/03/2013														
CHECKED	SG	14/03/2013														
Woodcock Hill Sandridge St Albans AL4 9HQ Tel: 01727-814030 Email: cad@homeoffice.gsi.gov.uk		PROJECT NAME : MAILROOM TEST PIECE PROJECT CODE : JOB NUMBER :	TITLE: NTP ADDRESS PLATE DWG NO: NTP0050													
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REVISIONS				
REV	REF	DESCRIPTION	DATE	APPROVED
A	BS	NEW ISSUE	14/03/2013	RJW



DO NOT SCALE DRAWING - DRAWN ON SOLIDWORKS
IF IN DOUBT ASK

- NOTES:-
- 1) LASER ENGRAVE PLATE
 - 2) MATERIAL - 1MM THK BLACK LASER ENGRAVING PLASTIC
 - 3) FIT PLATE TO OUTSIDE OF STORM CASE, REMOVE MANUFACTURES LABEL

 HOME OFFICE Centre for Applied Science and Technology	UNLESS OTHERWISE SPECIFIED: 1. DIMENSIONS ARE IN MILLIMETERS 2. SURFACE FINISH: 1.6 3. GENERAL TOLERANCES: ±0.20 4. HOLES: ±0.25 5. ANGLES: ±0.25° 6: DE-BURR ALL HOLES & SHARP EDGES		MATERIAL: SEE BOM	FINISH: NATURAL												
	<table border="1"> <thead> <tr> <th></th> <th>NAME</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>DRAWN</td> <td>RJW</td> <td>14/03/2013</td> </tr> <tr> <td>MODELLED</td> <td>RJW</td> <td>14/03/2013</td> </tr> <tr> <td>CHECKED</td> <td>SG</td> <td>14/03/2013</td> </tr> </tbody> </table>			NAME	DATE	DRAWN	RJW	14/03/2013	MODELLED	RJW	14/03/2013	CHECKED	SG	14/03/2013	SECURITY: NOT PROTECTIVELY MARKED	WEIGHT: 6.66 g
		NAME	DATE													
	DRAWN	RJW	14/03/2013													
MODELLED	RJW	14/03/2013														
CHECKED	SG	14/03/2013														
Woodcock Hill Sandridge St Albans AL4 9HQ Tel: 01727-814030 Email: cad@homeoffice.gsi.gov.uk		PROJECT NAME : MAILROOM TEST PIECE PROJECT CODE : JOB NUMBER :	TITLE: NTP SERIAL NUMBER PLATE													
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		USED ON: FILENAME: NTP0051														
		SCALE:2:1	SHEET 1 OF 1	A3												