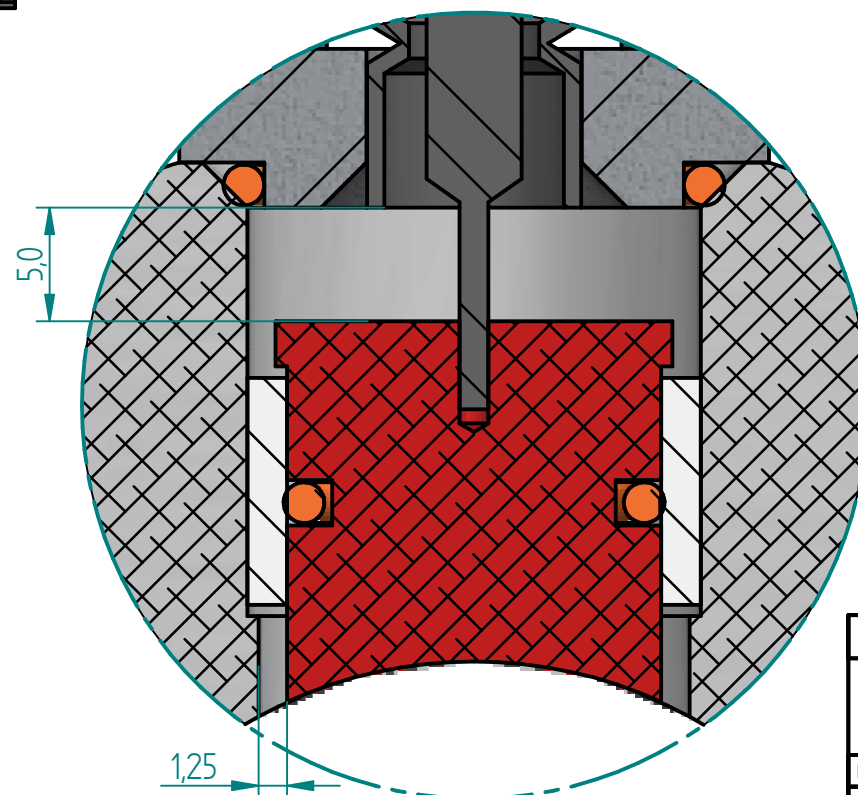
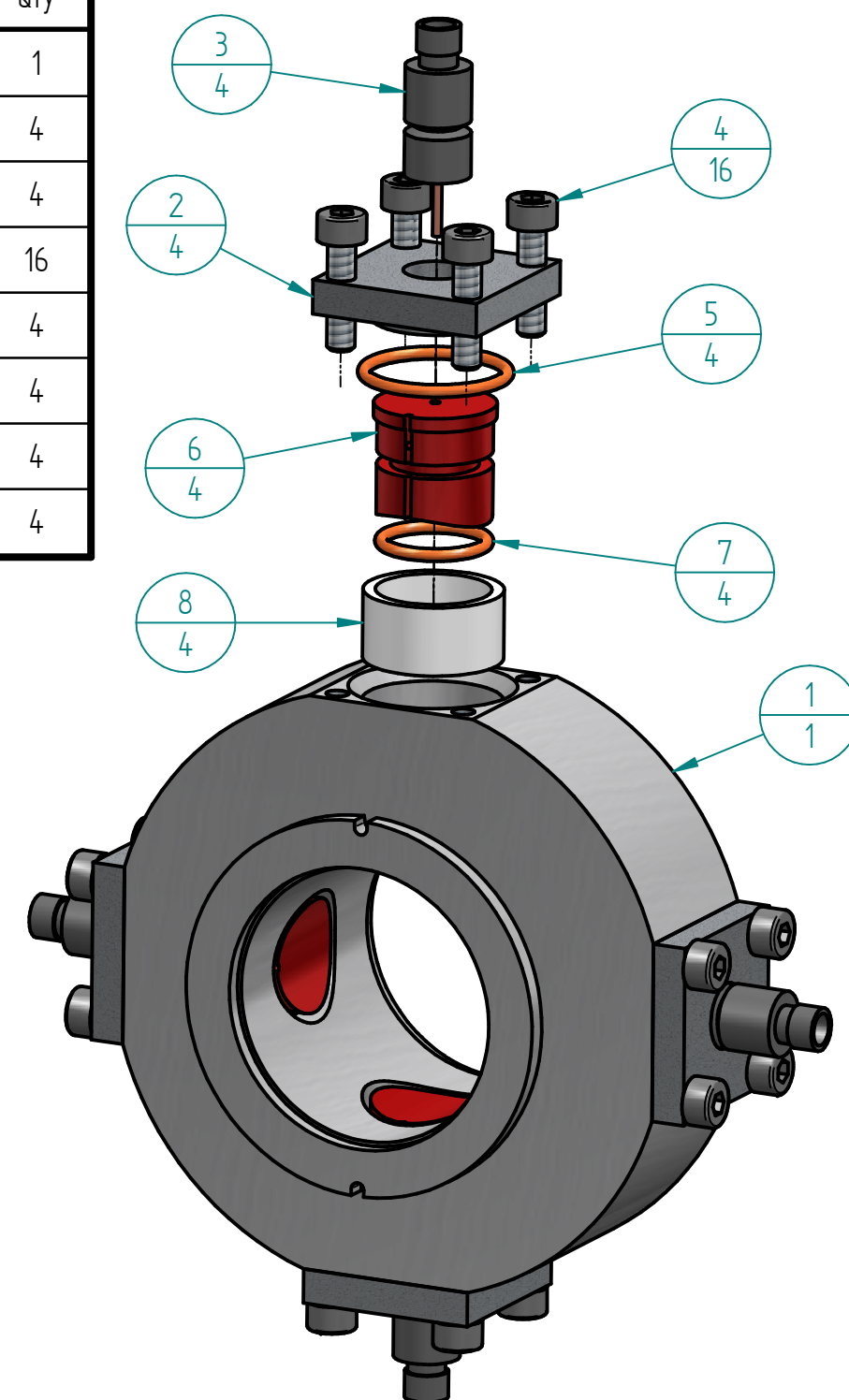



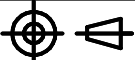

SECTION A-A

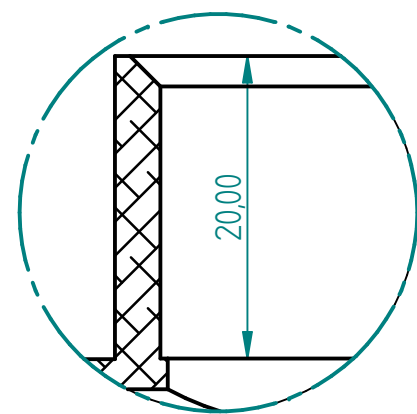


DETAIL B
SCALE 3:1

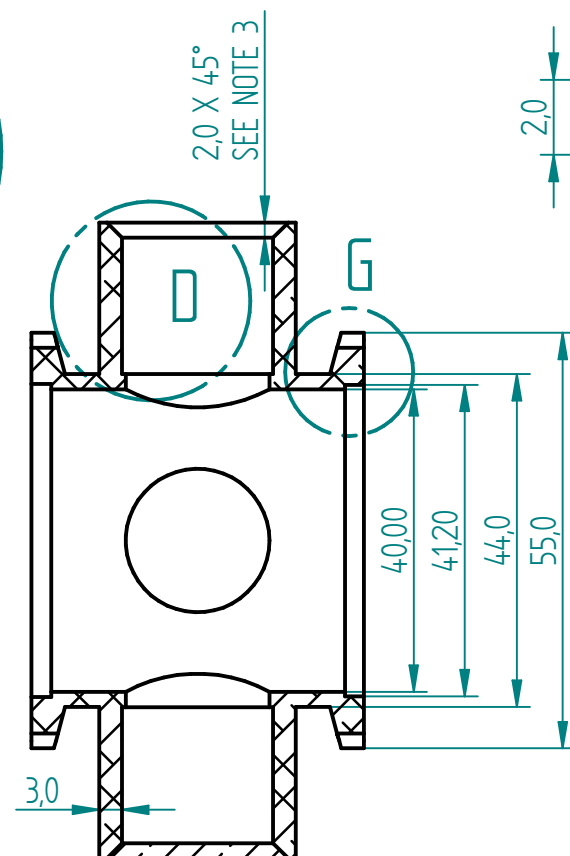
Item No.	Title	Material	Qty
1	BPM Body	Aluminum, 6082	1
2	Feedthrough Flange	Stainless Steel, 316	4
3	Weldable SMA Feedthrough	Stainless Steel, 316	4
4	M4 x 16 Caphead	Stainless Steel, 316	16
5	Feedthrough O-ring	Silicone	4
6	Button Pickup	Aluminum, 6082	4
7	Button O-ring	Silicone	4
8	Ceramic Insulator Ring	Macor Ceramic	4



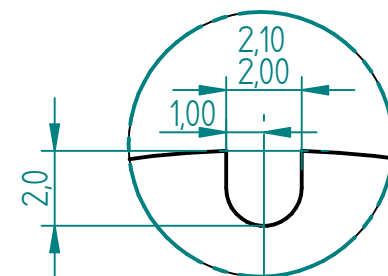
Drawn By Scott Lawrie		DATE 29/11/13		Checked By Pete Savage	
 © STFC 2010		 PROJECTION		TOLERANCES UNLESS STATED IN mm	
		X ± 0.5		SURFACE TEXTURE UNLESS STATED	
		X.X ± 0.3		ANGLE ±0.2°	
		X.XX ± 0.1			
DIMENSIONS IN mm UNLESS STATED			MATERIAL & SPEC.		FINISH
			SEE ITEM LIST		CLEAN
ISIS INJECTOR GROUP			USED ON FRONT END TEST STAND MEBT		
RUTHERFORD APPLETON LABORATORY, HARWELL OXFORD, CHILTON, OXON, OX11 0QX					
TITLE					SCALE UNLESS STATED
Button BPM Assembly					1:1
					SHEET 1 OF 7



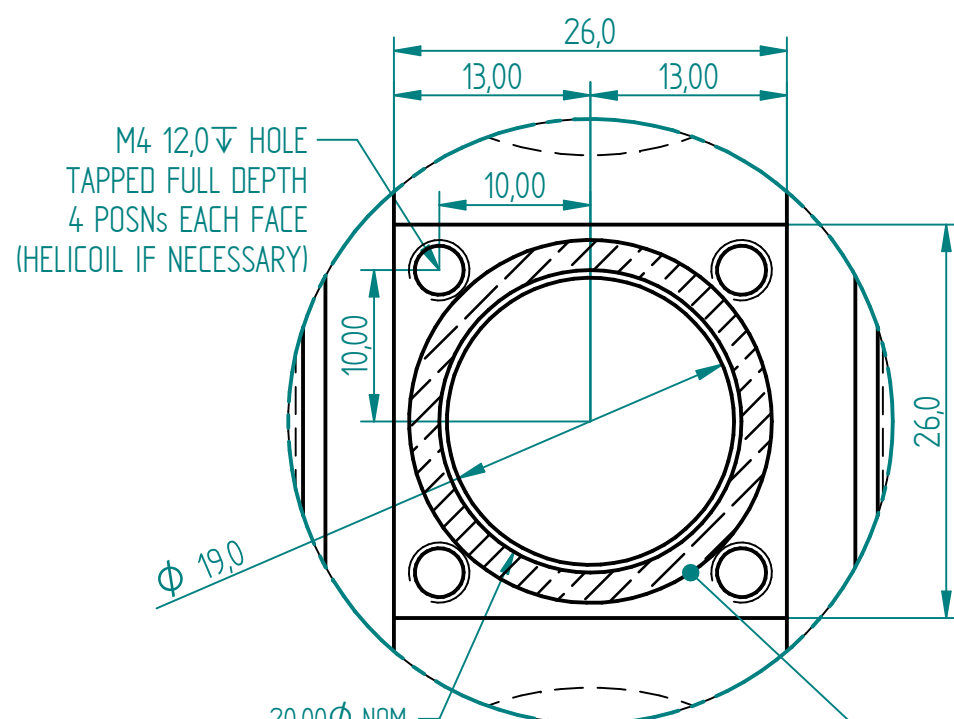
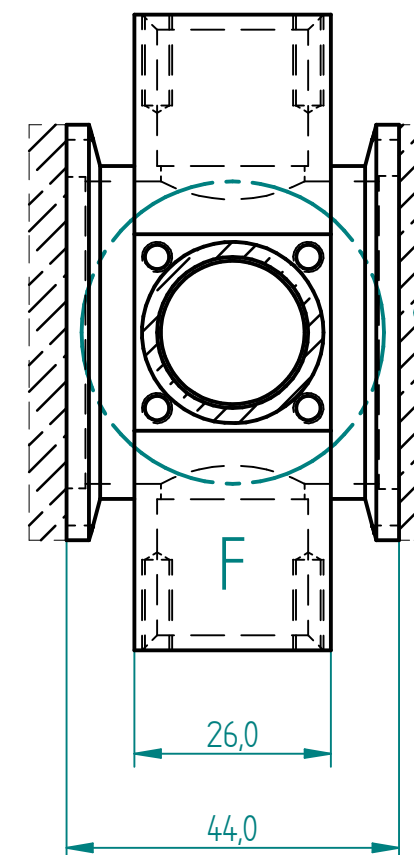
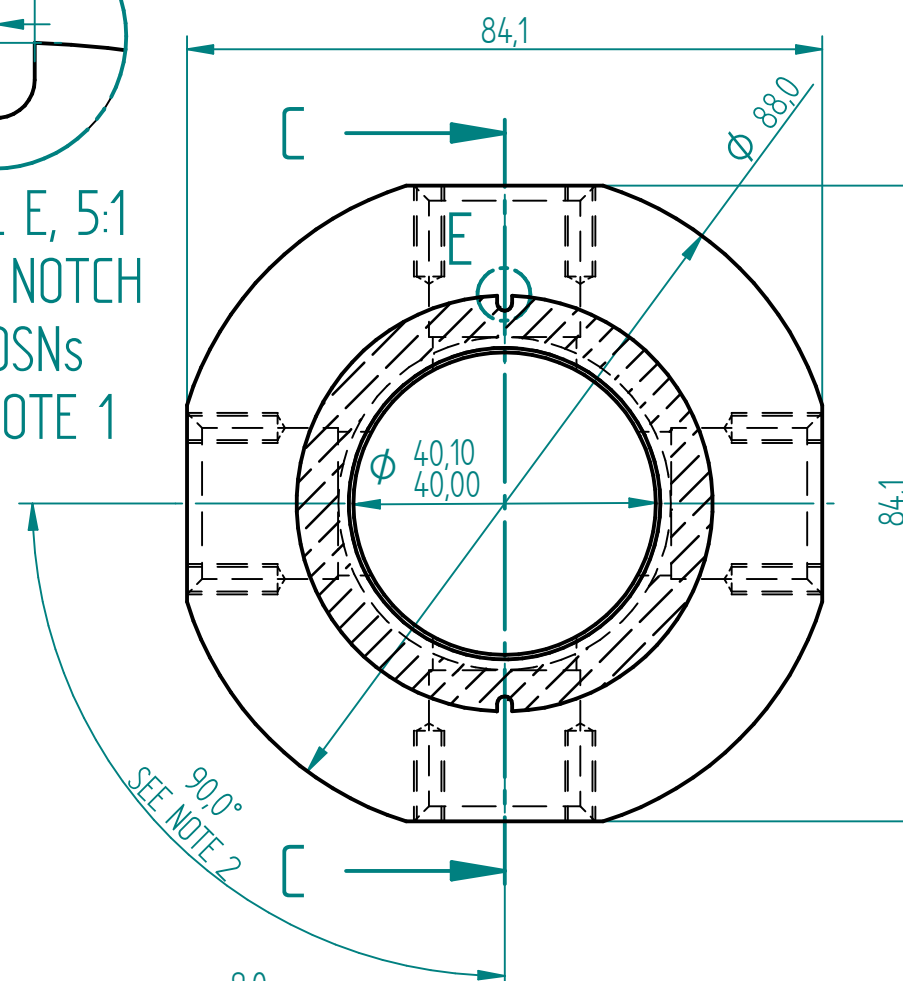
DETAIL D
2:1



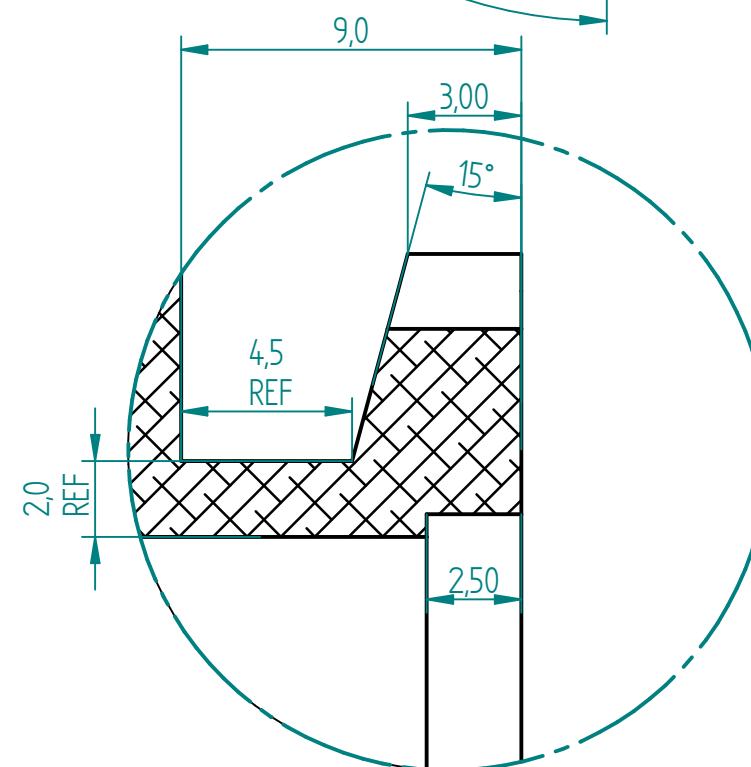
SECTION C-C



DETAIL E, 5:1
DATUM NOTCH
2 POSNs
SEE NOTE 1





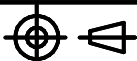

DETAIL F
2:1

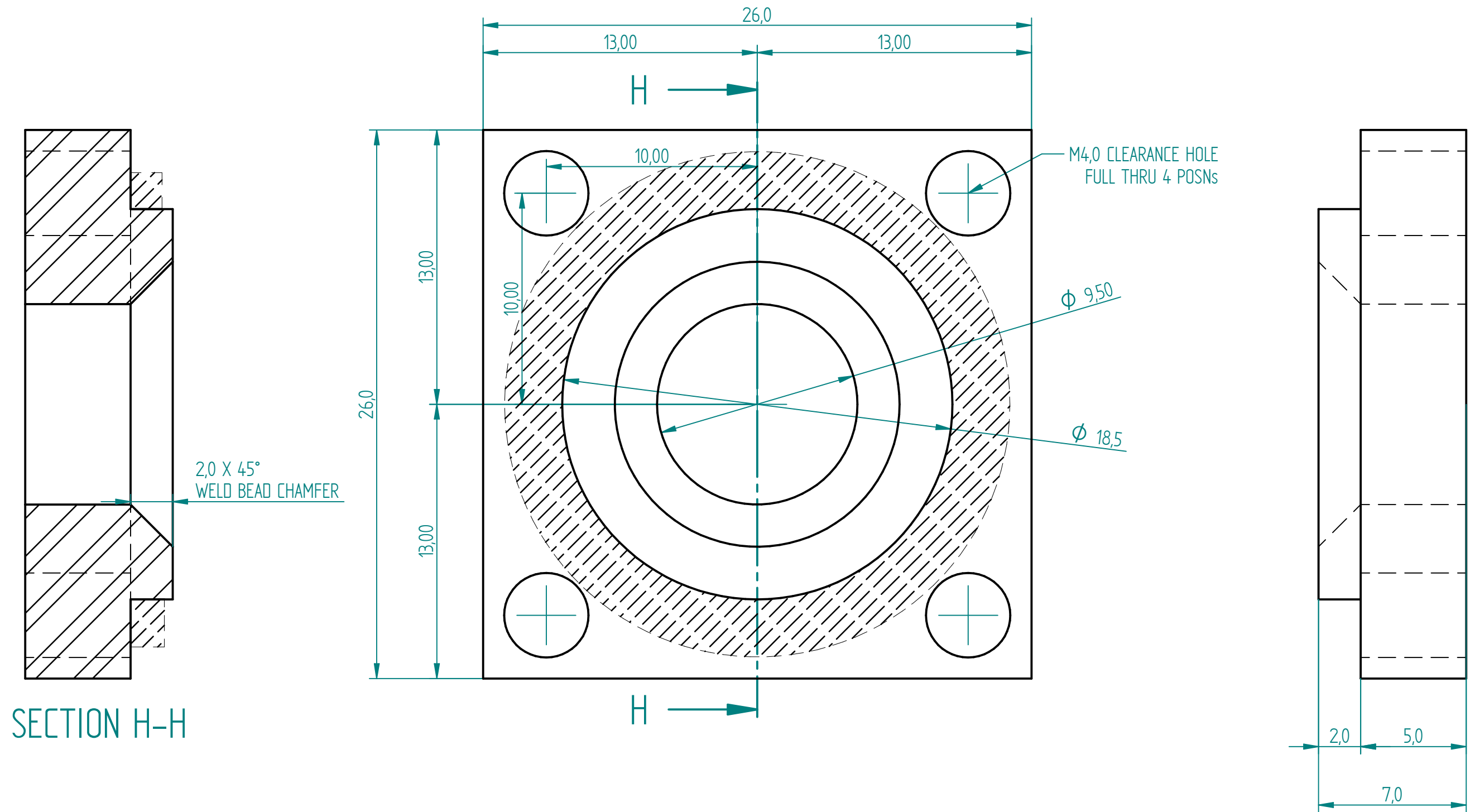


DETAIL G, 5:1
KF40 CLAMP
FLANGE DIMENSIONS

NOTES:


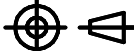

1. Datum notches equispaced 180,0° ensure rotational alignment of complete assembly with rest of beamline.
2. Four faces and holes equispaced by 90,0° as shown. Zero referenced from datum notches.
3. Areas marked  indicated vacuum mating faces. Ensure burr and scratch free. Protect post-machining.

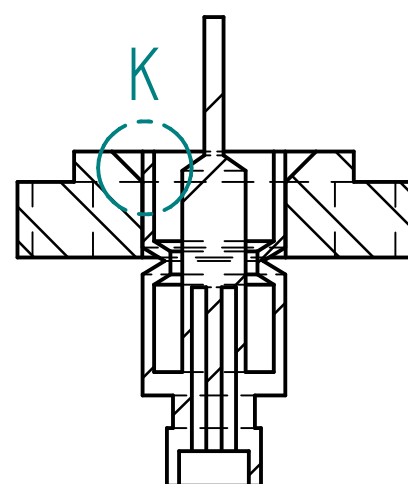
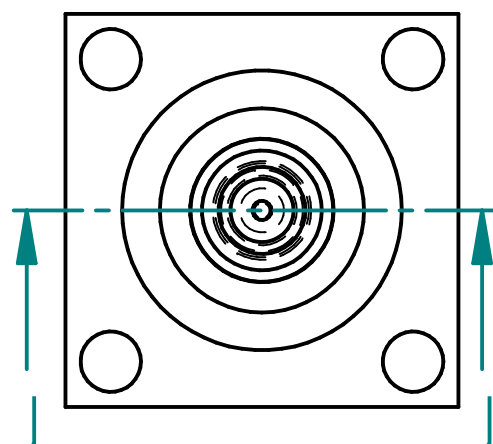
Drawn By Scott Lawrie		DATE 29/11/13		Checked By Pete Savage	
 © SITFC 2010		 PROJECTION		TOLERANCES UNLESS STATED IN mm	
		X ± 0.5		SURFACE TEXTURE UNLESS STATED	
		X.X ± 0.3		ANGLE ±0.2°	
		X.XX ± 0.1			
DIMENSIONS IN mm UNLESS STATED			MATERIAL & SPEC.		FINISH
			ALUMINIUM ALLOY 6082		CLEAN
ISIS INJECTOR GROUP			USED ON		REMOVE ALL BURRS
			BUTTON BPM ASSEMBLY		
RUTHERFORD APPLETON LABORATORY, HARWELL OXFORD, CHILTON, OXON, OX11 0QX					
TITLE					SCALE UNLESS STATED
BPM Body					1:1
					SHEET 2 OF 7



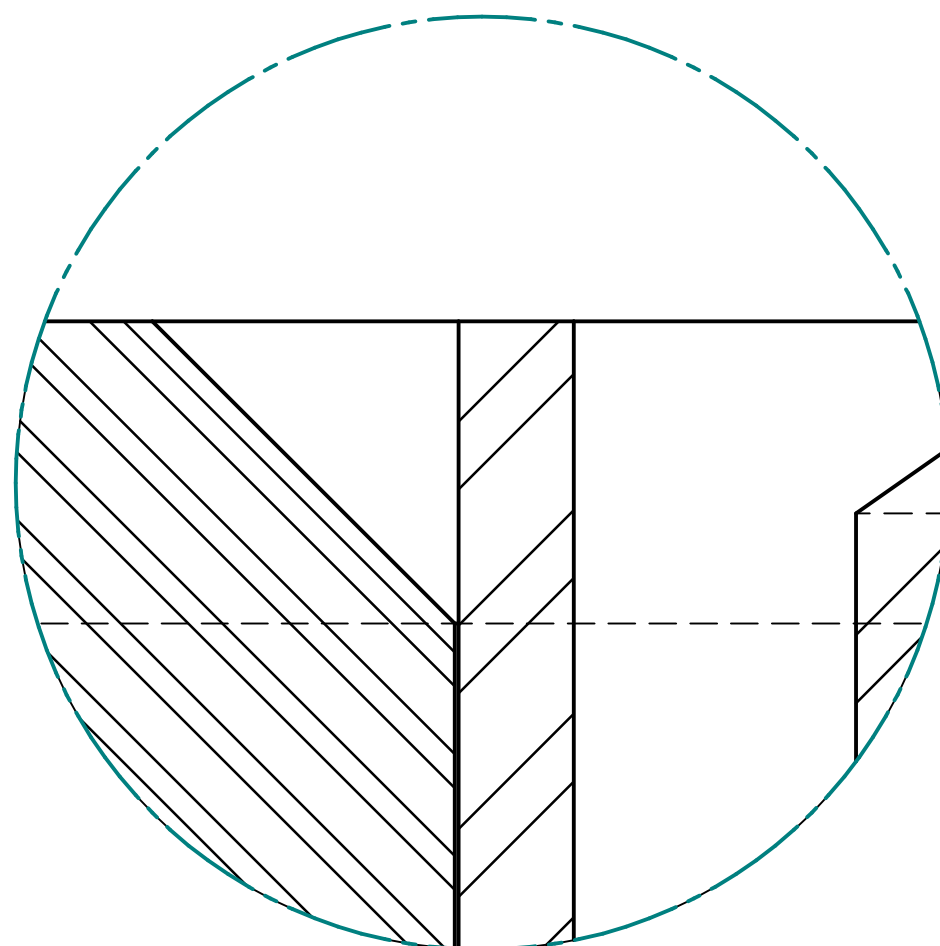
SECTION H-H

NOTE: AREA MARKED  IS A VACUUM MATING FACE.
ENSURE BURR AND SCRATCH FREE AND PROTECT POST-MACHINING.

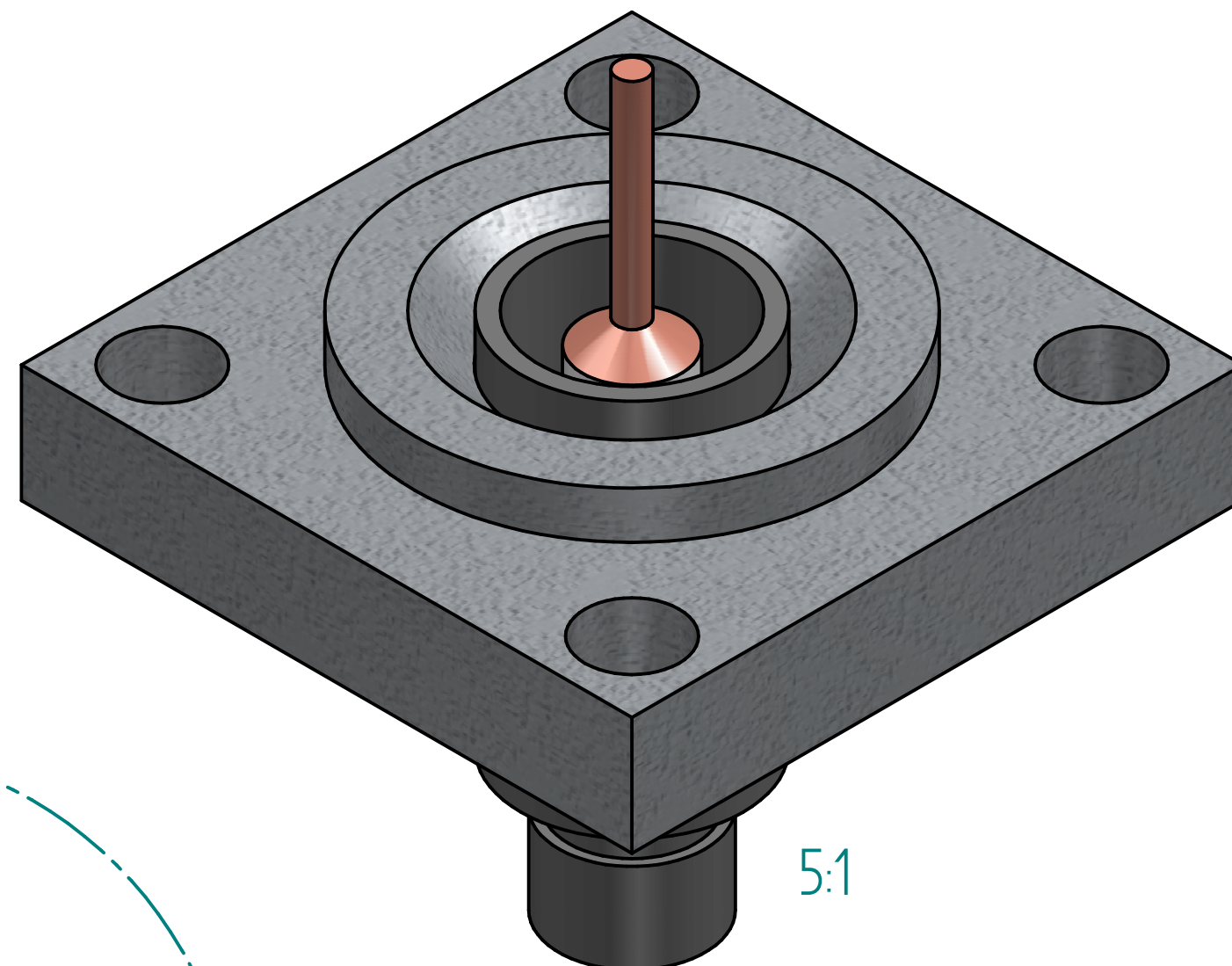
Drawn By Scott Lawrie		DATE 29/11/13	Checked By Pete Savage	
 © STFC 2010	 PROJECTION	TOLERANCES UNLESS STATED IN mm		SURFACE TEXTURE UNLESS STATED
		X ± 0.5		 1.6 μm
		X.X ± 0.3		
		X.XX ± 0.1		
DIMENSIONS IN mm UNLESS STATED		MATERIAL & SPEC.		FINISH
		STAINLESS STEEL 316		CLEAN
ISIS INJECTOR GROUP		USED ON BUTTON BPM ASSEMBLY		REMOVE ALL BURRS
RUTHERFORD APPLETON LABORATORY, HARWELL OXFORD, CHILTON, OXON, OX11 0QX				
TITLE				SCALE UNLESS STATED
Feedthrough Flange				5:1
				SHEET 3 OF 7



SECTION J-J


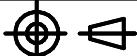



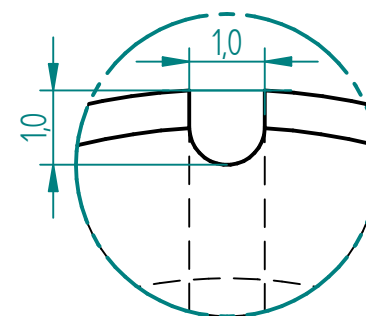
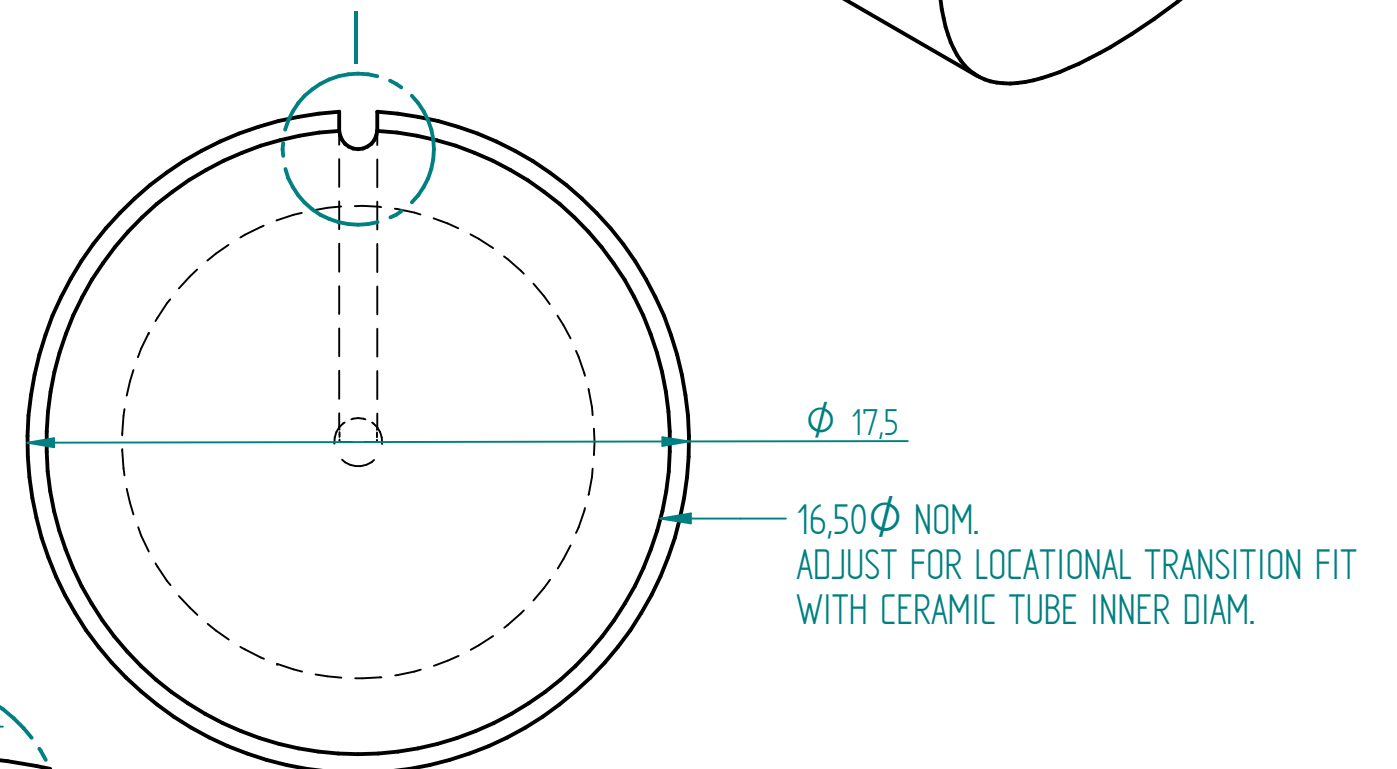
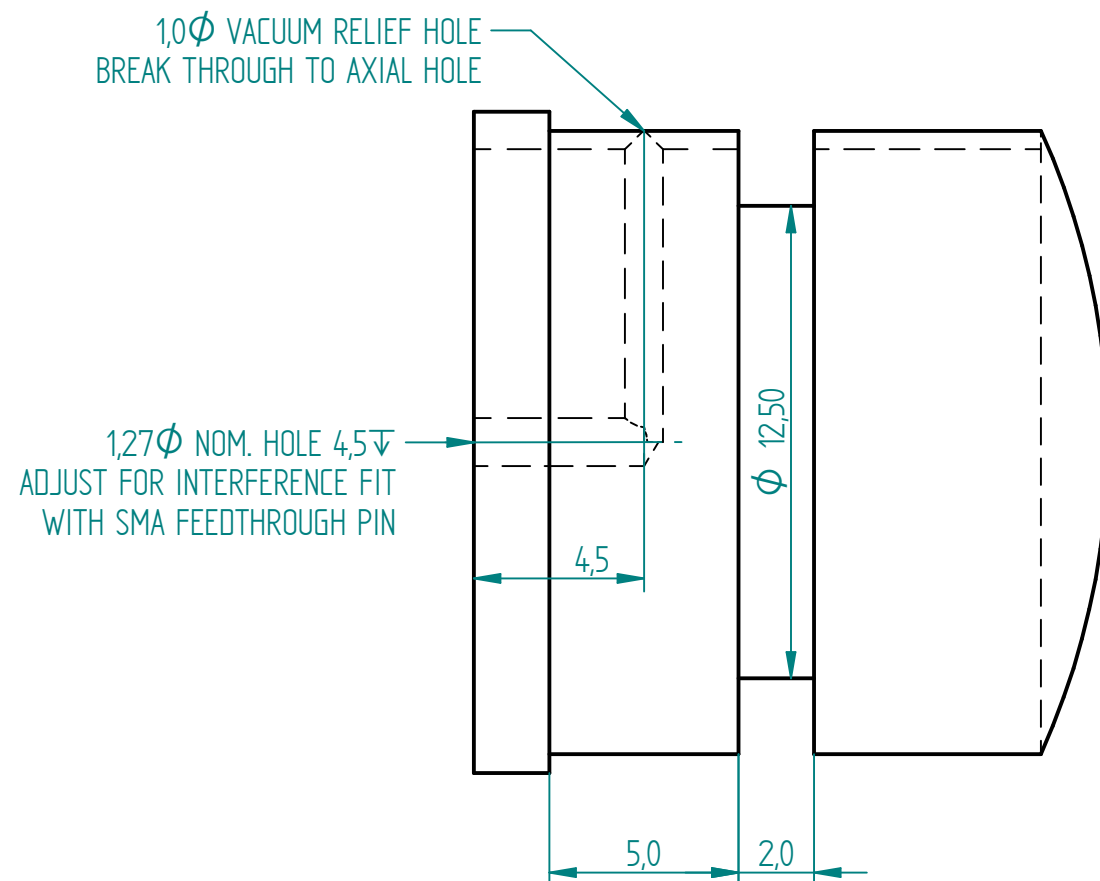
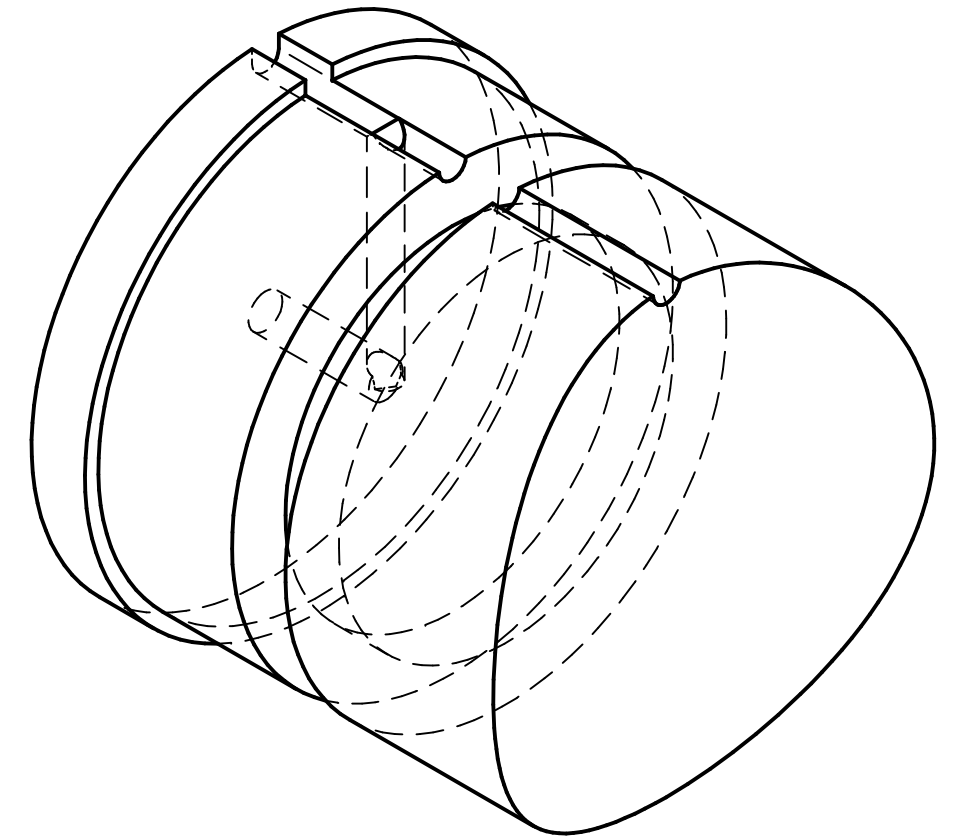
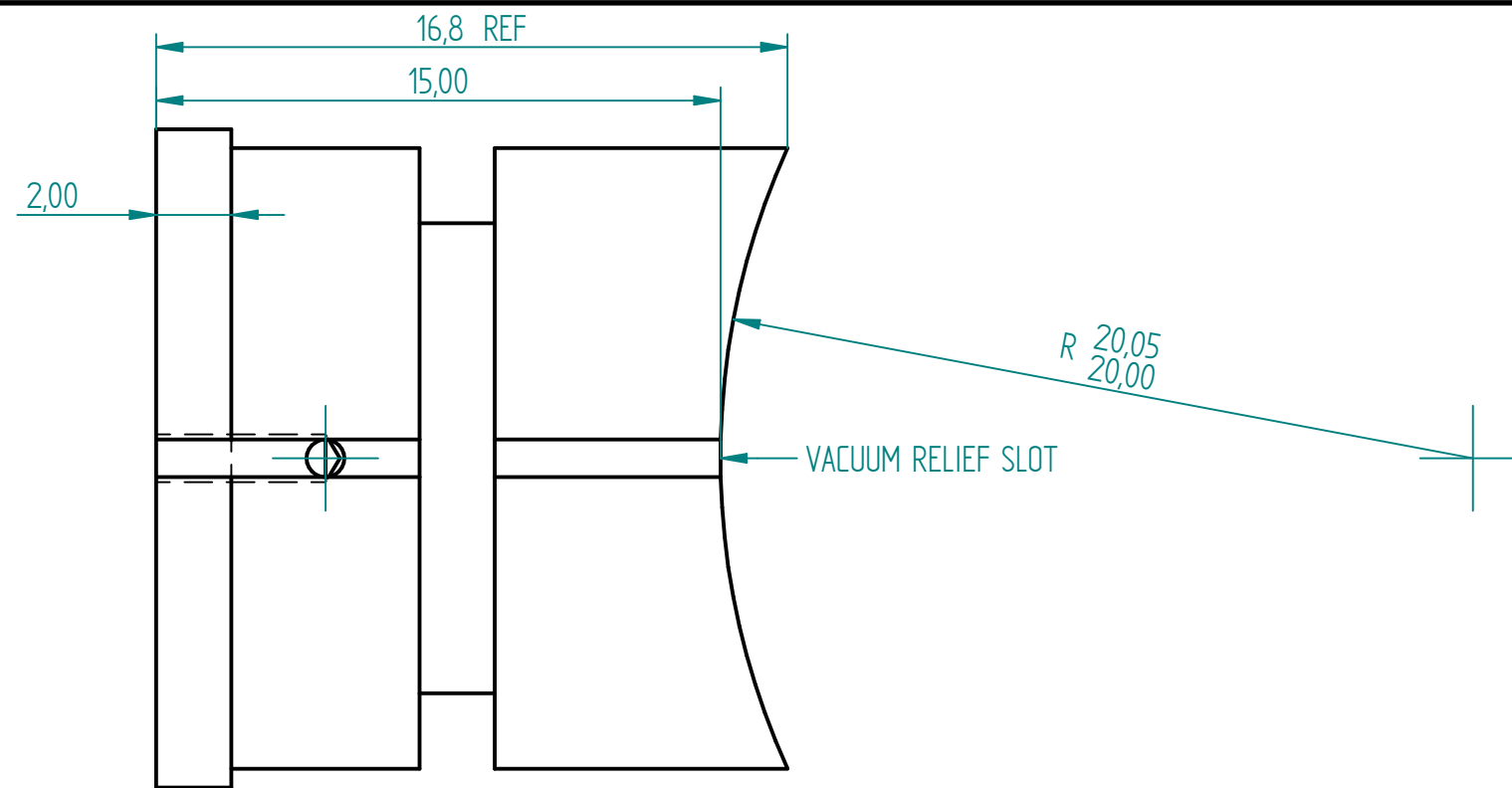
DETAIL K
20:1






5:1

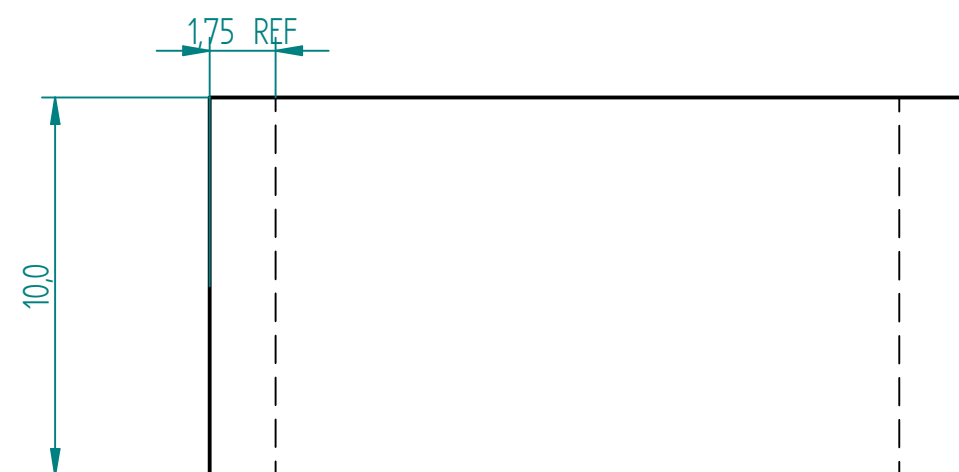
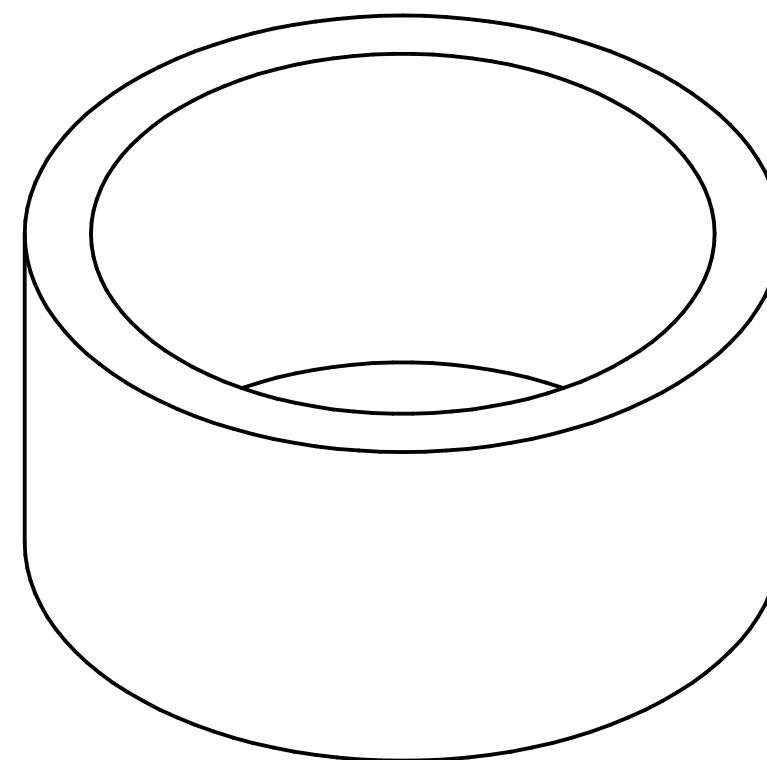
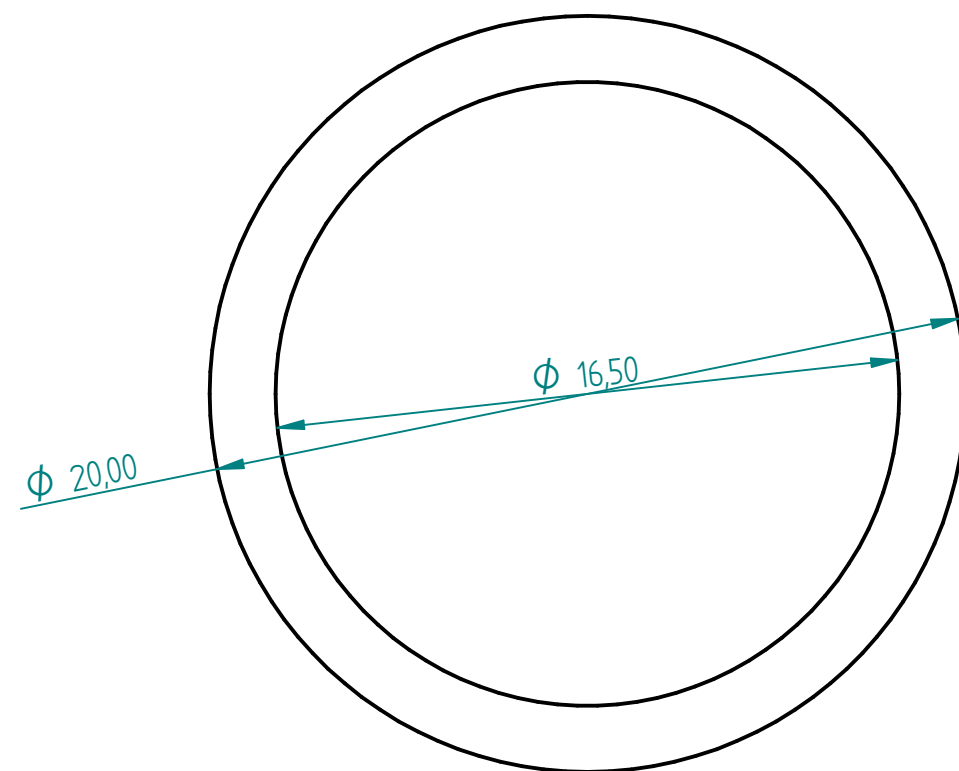
Vacuum leak-proof weld required.
SMA feedthrough to be welded into flange plate.
Feedthrough and flange surfaces to lie flush before weld.
Weld bead to be contained within chamfer.
Post-weld machine skim flush if required.


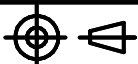

Drawn By Scott Lawrie		DATE 29/11/13	Checked By Pete Savage	
 © STFC 2010	 PROJECTION	TOLERANCES UNLESS STATED IN mm X ± 0.5 X.X ± 0.3 X.XX ± 0.1		SURFACE TEXTURE UNLESS STATED  1.6 μm
DIMENSIONS IN mm UNLESS STATED		MATERIAL & SPEC. STAINLESS STEEL 316		FINISH CLEAN REMOVE ALL BURRS
ISIS INJECTOR GROUP		USED ON BUTTON BPM ASSEMBLY		
RUTHERFORD APPLETON LABORATORY, HARWELL OXFORD, CHILTON, OXON, OX11 0QX				
TITLE Welded SMA Flange				SCALE UNLESS STATED 2:1
				SHEET 4 OF 7

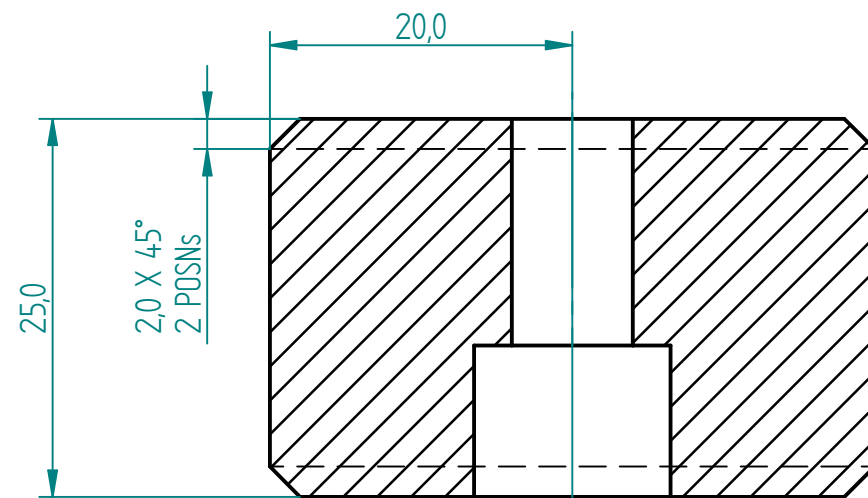


DETAIL I
VACUUM RELIEF SLOT
10:1

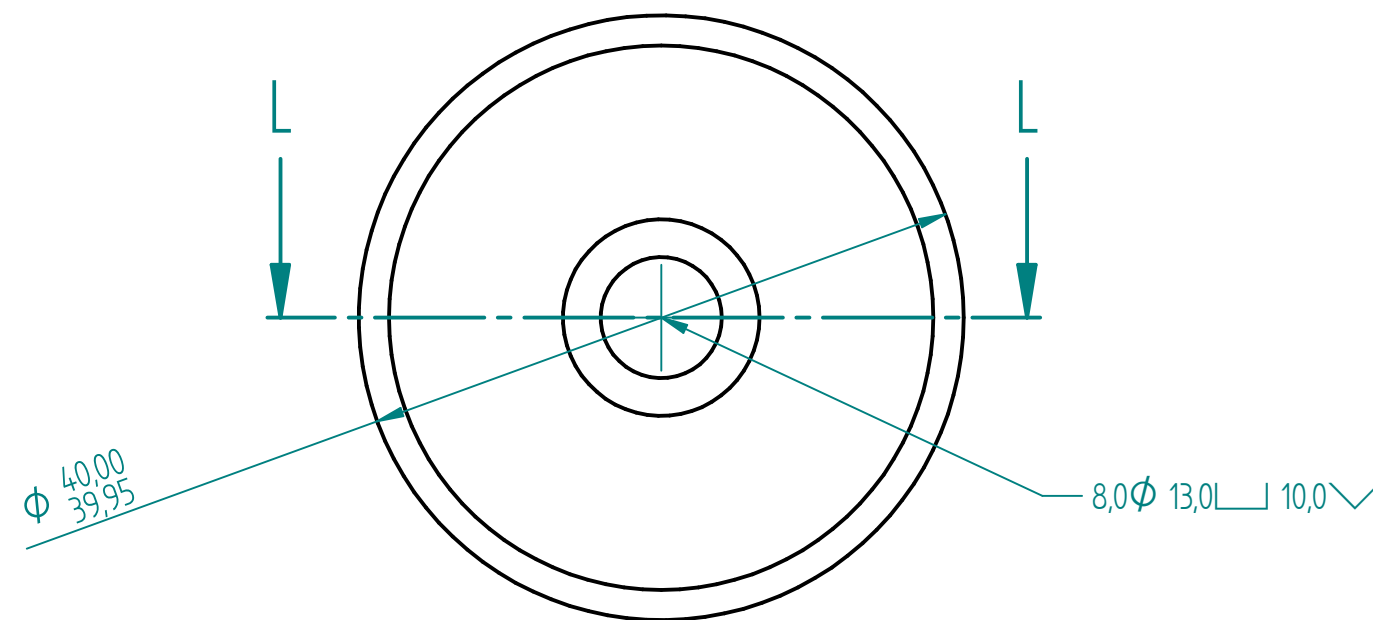
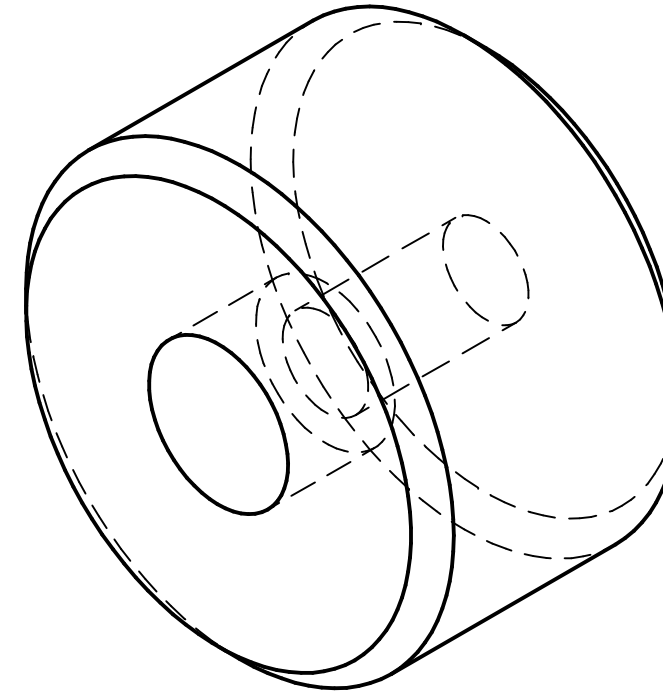
Drawn By Scott Lawrie		DATE 29/11/13		Checked By Pete Savage			
 © STFC 2010		 PROJECTION		TOLERANCES UNLESS STATED IN mm		SURFACE TEXTURE UNLESS STATED	
		X ± 0.5		ANGLE ±0.2°			
		X.X ± 0.3					
		X.XX ± 0.1					
DIMENSIONS IN mm UNLESS STATED			MATERIAL & SPEC.		FINISH		
			ALUMINIUM ALLOY 6082		CLEAN		
ISIS INJECTOR GROUP			USED ON BUTTON BPM ASSEMBLY		REMOVE ALL BURRS		
RUTHERFORD APPLETON LABORATORY, HARWELL OXFORD, CHILTON, OXON, OX11 0QX							
TITLE						SCALE UNLESS STATED	
Button						1:1	
						SHEET 5 OF 7	




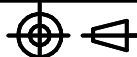

Drawn By Scott Lawrie		DATE 29/11/13		Checked By Pete Savage			
 © STFC 2010		 PROJECTION		TOLERANCES UNLESS STATED IN mm X ± 0.5 X.X ± 0.3 ANGLE ±0.2° X.XX ± 0.1		SURFACE TEXTURE UNLESS STATED  1.6/μm	
DIMENSIONS IN mm UNLESS STATED				MATERIAL & SPEC. MACOR MACHINABLE CERAMIC		FINISH CLEAN	
ISIS INJECTOR GROUP		USED ON BUTTON BPM ASSEMBLY					
RUTHERFORD APPLETON LABORATORY, HARWELL OXFORD, CHILTON, OXON, OX11 0QX							
TITLE Ceramic Ring						SCALE UNLESS STATED 1:1	
						SHEET 6 OF 7	



SECTION L-L



Alignment piece to ensure correct rotation and position of four buttons relative to central axis. Insertion and removal using M8 bolt.

Drawn By Scott Lawrie		DATE 29/11/13		Checked By Pete Savage			
 © STFC 2010		 PROJECTION		TOLERANCES UNLESS STATED IN mm		SURFACE TEXTURE UNLESS STATED	
				X ± 0.5		 1.6 μm	
				X.X ± 0.3			
				X.XX ± 0.1			
DIMENSIONS IN mm UNLESS STATED		MATERIAL & SPEC.		FINISH		CLEAN REMOVE ALL BURRS	
		STAINLESS STEEL 316					
ISIS INJECTOR GROUP		USED ON BUTTON BPM ASSEMBLY					
RUTHERFORD APPLETON LABORATORY, HARWELL OXFORD, CHILTON, OXON, OX11 0QX							
TITLE						SCALE UNLESS STATED	
Alignment Jig						1:1	
						SHEET 7 OF 7	