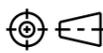
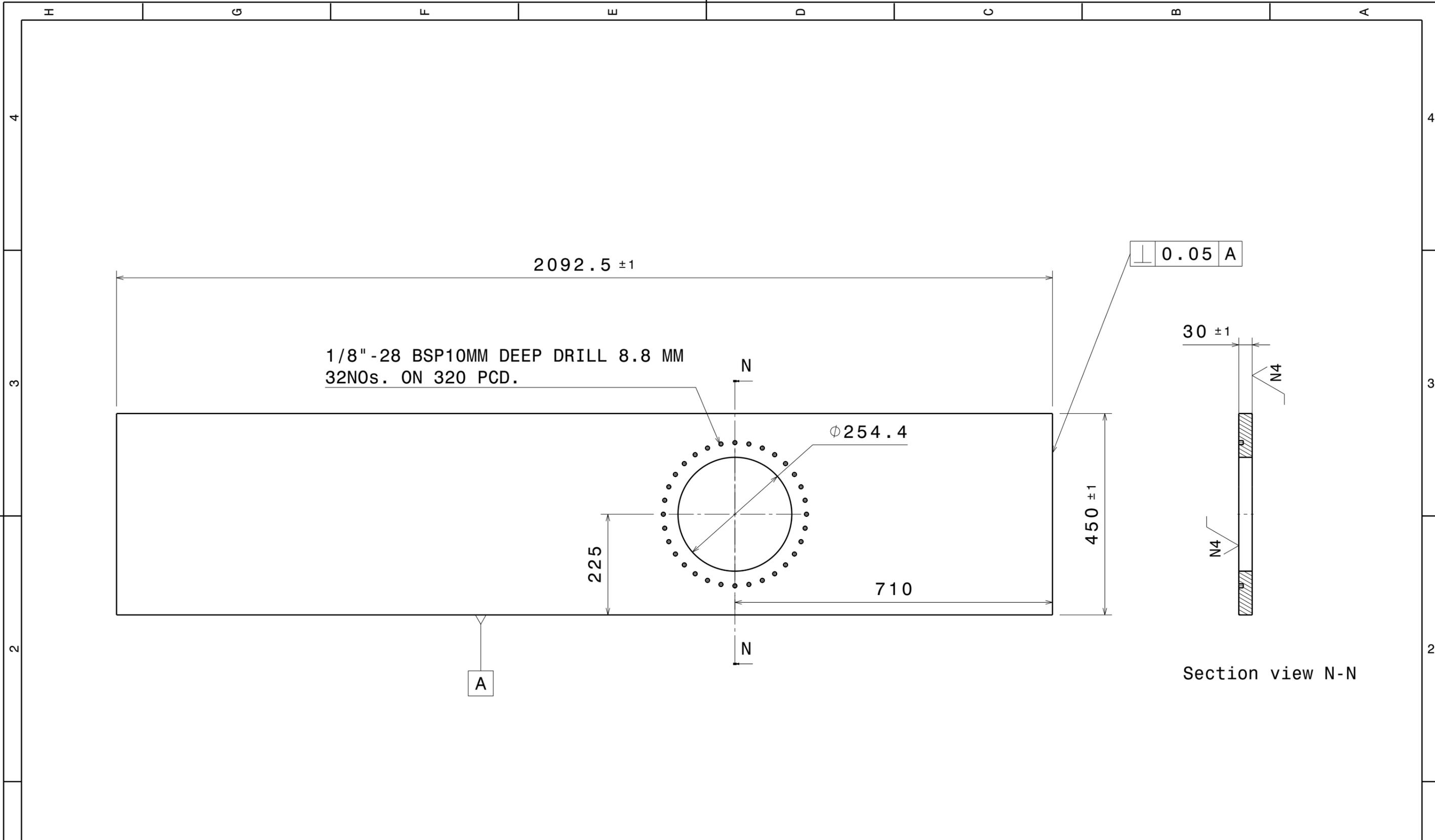
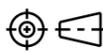
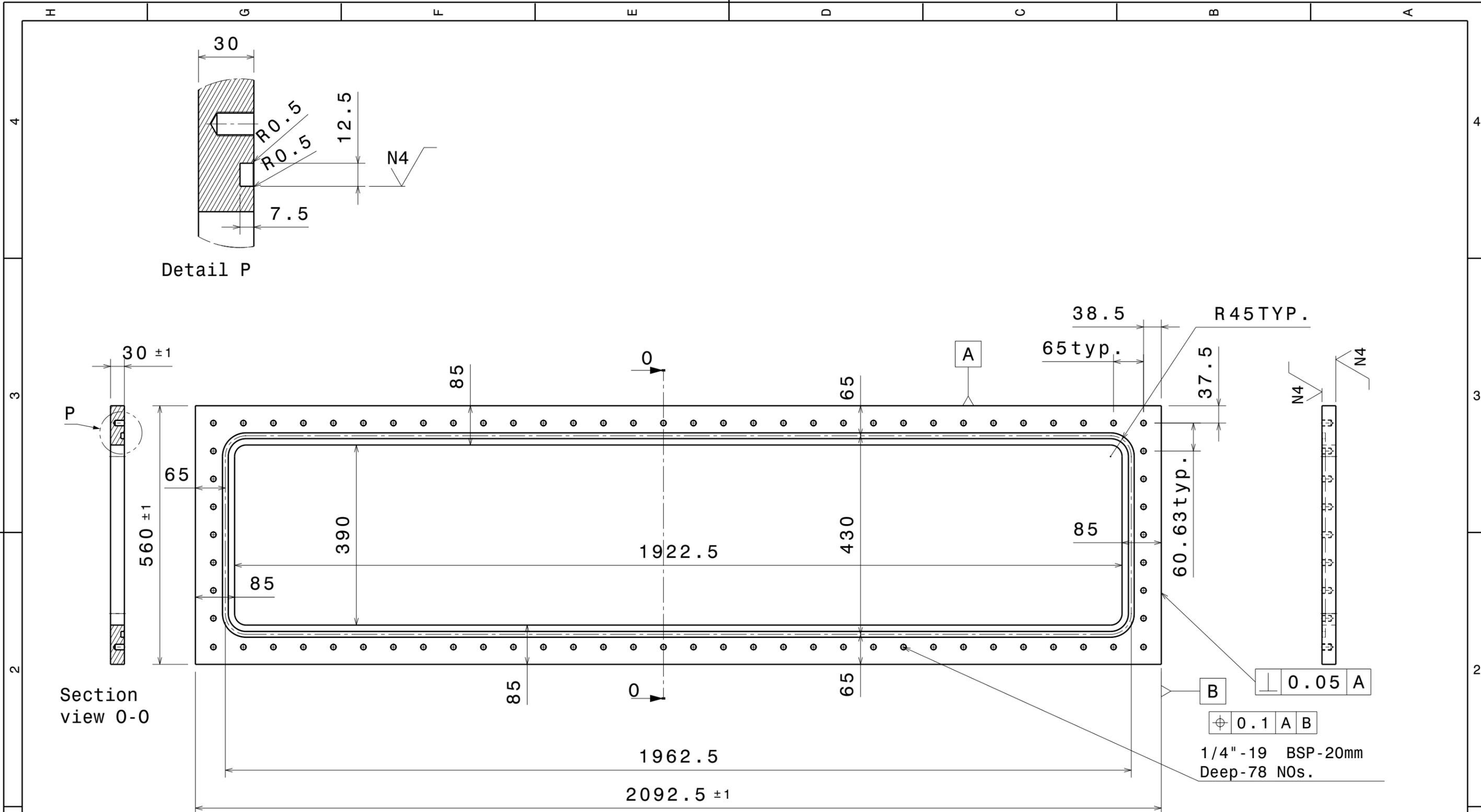


DRG.NO		▽ 8-25	▽▽ 1.6-8	▽▽▽ 0.025-1.6	▽▽▽▽ < 0.025	REVISION COLUMN				RFQ GROUP:		 Institute for Plasma Research प्लाज्मा अनुसंधान संस्थान Bhat, Near Indira Bridge, Gandhinagar 382428, Gujarat (India)				
CO-ORDINATED BY						REV	ZONE	DESCRIPTION	DATE	REMARKS	APPROVED		ALL DIMENSIONS ARE IN 'mm' UNLESS OTHERWISE STATED			
MACHINING DEVIATIONS FOR NON-TOLERANCED DIMENSIONS												SCALE	1:1	DATE	TITLE	
LENGTH IN mm OF SHORTER SIDE OF ANGLES				LENGTH OR DIA	UPTO 6	6-30	30-120	120-315				DRAWN	K.R.R.	07.12.17	 SIDE PLATE - 3	
UPTO 10	10-50	50-120	OVER 120-400		+0.1	+0.2	+0.3	+0.5				CHECKED	PKC			REF DRG NO:
+1°	+0°-30'	+0°-20'	+0°-10'								APPROVED	JMK		DRG.NO	IPR/17/A3/RFQ/19030018	REV 0
													SHEET	1 OF 1		

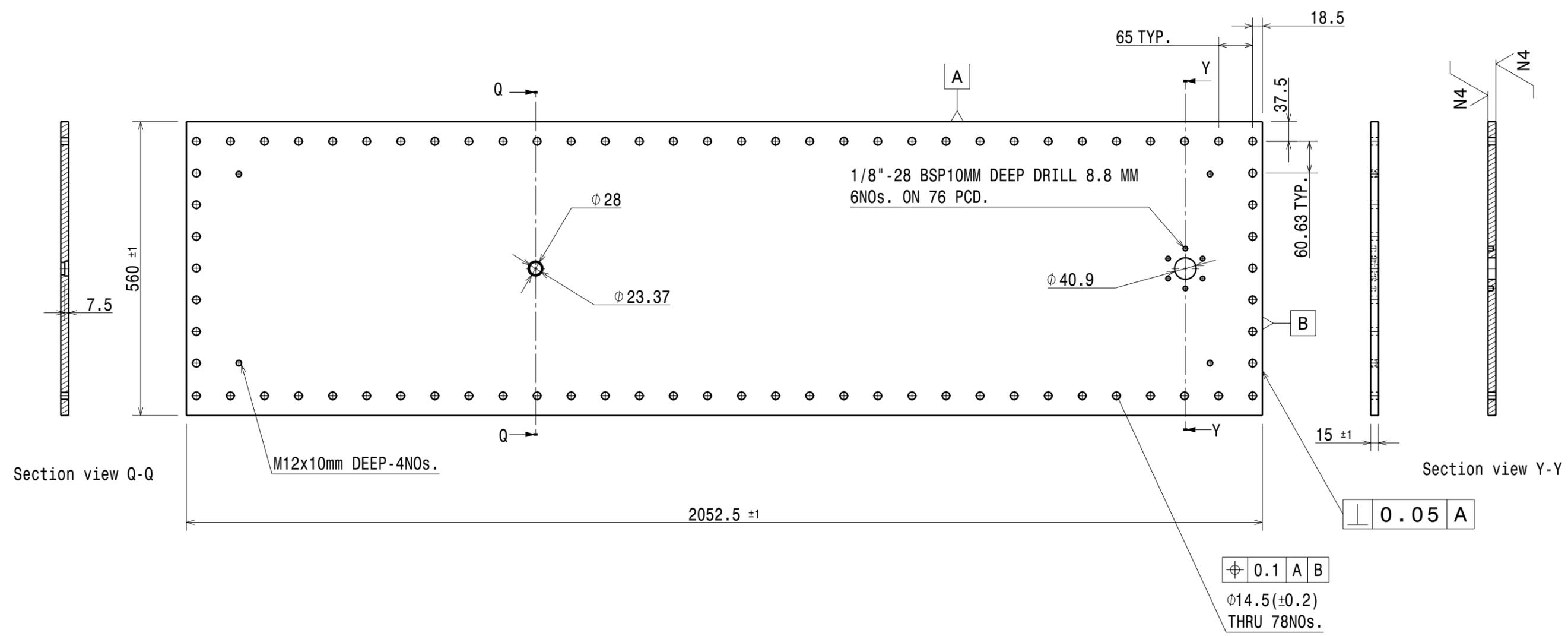


DRG.NO	▽ 8-25	▽▽ 1.6-8	▽▽▽ 0.025-1.6	▽▽▽▽ < 0.025	REVISION COLUMN					RFQ GROUP:			 Institute for Plasma Research प्लाज्मा अनुसंधान संस्थान Bhat, Near Indira Bridge, Gandhinagar 382428, Gujarat (India)			
CO-ORDINATED BY					REV	ZONE	DESCRIPTION	DATE	REMARKS	APPROVED	ALL DIMENSIONS ARE IN 'mm' UNLESS OTHERWISE STATED			TITLE		
MACHINING DEVIATIONS FOR NON-TOLERANCED DIMENSIONS											SCALE	1:1	DATE	 SIDE PLATE - 4		
LENGTH IN mm OF SHORTER SIDE OF ANGLES				LENGTH OR DIA	UPTO 6	6-30	30-120	120-315			DRAWN	K.R.R.	07.12.17			
UPTO 10	10-50	50-120	OVER 120-400								CHECKED	PKC		REF DRG NO:	REV 0	
+1°	+0°-30'	+0°-20'	+0°-10'		+0.1	+0.2	+0.3	+0.5			APPROVED	JMK		DRG.NO	I PR/17/A3/RFQ/19030019	SHEET 1 OF 1



DRG.NO	▽ 8-25	▽▽ 1.6-8	▽▽▽ 0.025-1.6	▽▽▽▽ < 0.025	REVISION COLUMN					RFQ GROUP:		 Institute for Plasma Research प्लाज्मा अनुसंधान संस्थान Bhat, Near Indira Bridge, Gandhinagar 382428, Gujarat (India)			
CO-ORDINATED BY					REV	ZONE	DESCRIPTION	DATE	REMARKS	APPROVED	ALL DIMENSIONS ARE IN 'mm' UNLESS OTHERWISE STATED				
MACHINING DEVIATIONS FOR NON-TOLERANCED DIMENSIONS											SCALE	1:1	DATE	TITLE	
LENGTH IN mm OF SHORTER SIDE OF ANGLES				LENGTH OR DIA	UPTO 6	6-30	30-120	120-315				DRAWN	K.R.R.	07.12.17	TOP PLATE - 1
UPTO 10	10-50	50-120	OVER 120-400		UPTO 0.1	+0.2	+0.3	+0.5				CHECKED	PKC		REF DRG NO:
+1°	+0°-30'	+0°-20'	+0°-10'								APPROVED	JMK		DRG.NO	SHEET 1 OF 1

- NOTE:-
01. ALL SHARP CORNERS SHALL BE ROUNDED OFF.
 02. THE FINISH MACHINED/GROUND SURFACES SHALL BE PRESERVED AND PROTECTED SUITABLY TO AVOID ANY DAMAGE DURING HANDLING TRANSIT AND ASEMBLY
 03. USE DRILL JIG FOR DRILLING OF HOLES.
 04. THREADING SHALL BE AS PER IS4218
 05. AFTER MACHINING THE COMPONENT SHALL BE SUBJECTED TO SOLUTION CLEANING OR ULTRASONIC CLEANING AS PER APPROVED PROCEDURE

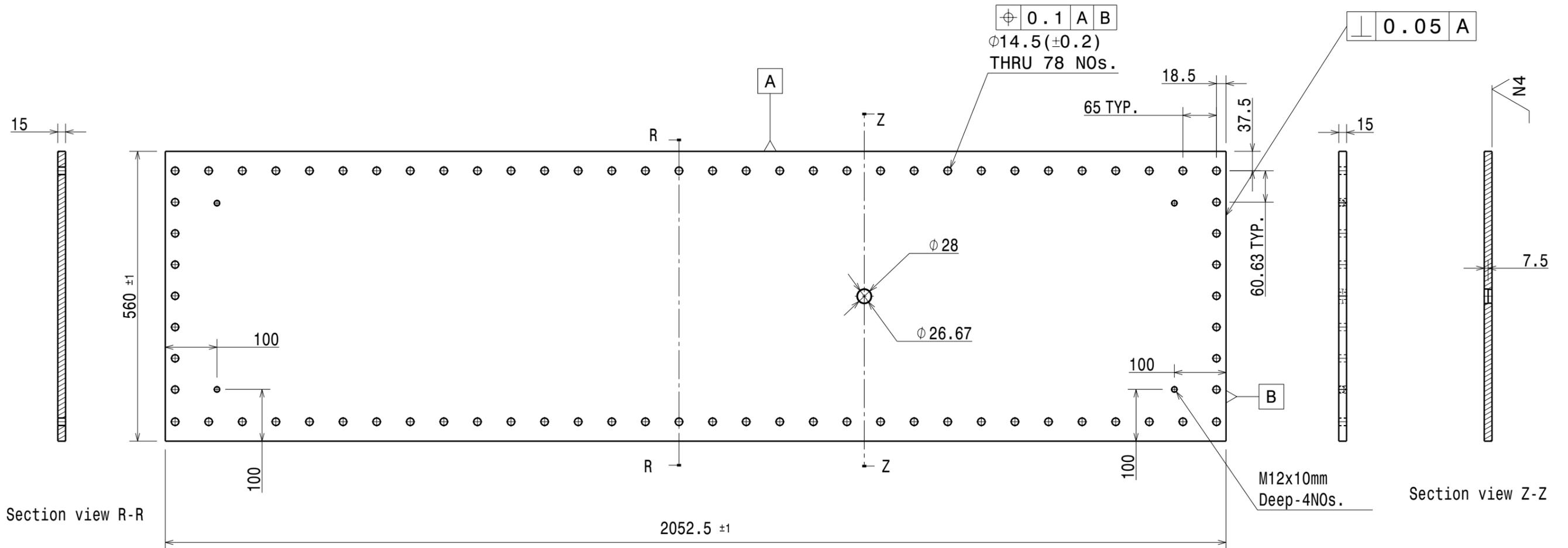


DRG.NO	▽ 8-25	▽▽ 1.6-8	▽▽▽ 0.025-1.6	▽▽▽▽ < 0.025	REVISION COLUMN					RFQ GROUP:			Institute for Plasma Research प्लाज्मा अनुसंधान संस्थान Bhat, Near Indira Bridge, Gandhinagar 382428, Gujarat (India)		
CO-ORDINATED BY					REV	ZONE	DESCRIPTION	DATE	REMARKS	APPROVED	ALL DIMENSIONS ARE IN 'mm' UNLESS OTHERWISE STATED				
MACHINING DEVIATIONS FOR NON-TOLERANCED DIMENSIONS											SCALE	1:1	DATE	TITLE	
LENGTH IN mm OF SHORTER SIDE OF ANGLES				LENGTH OR DIA	UPTO 6	6-30	30-120	120-315				DRAWN	K.R.R.	27.11.17	TOP PLATE COVER-1
UPTO 10	10-50	50-120	OVER 120-400		UPTO 0.1	+0.2	+0.3	+0.5				CHECKED	PKC		REF DRG NO:
+1°	+0°-30'	+0°-20'	+0°-10'								APPROVED	JMK		DRG.NO	SHEET 1 OF 1
											IPR/17/A3/RFQ/19030023				

NOTE:-

01. ALL SHARP CORNERS SHALL BE ROUNDED OFF.
02. THE FINISH MACHINED/GROUND SURFACES SHALL BE PRESERVED AND PROTECTED SUITABLY TO AVOID ANY DAMAGE DURING HANDLING TRANSIT AND ASEMBLY
03. USE DRILL JIG FOR DRILLING OF HOLES.
04. THREADING SHALL BE AS PER IS4218
05. AFTER MACHINING THE COMPONENT SHALL BE SUBJECTED TO SOLUTION CLEANING OR ULTRASONIC CLEANING AS PER APPROVED PROCEDURE

N8 $\sqrt{1}$ N5 $\sqrt{1}$ N4 $\sqrt{1}$

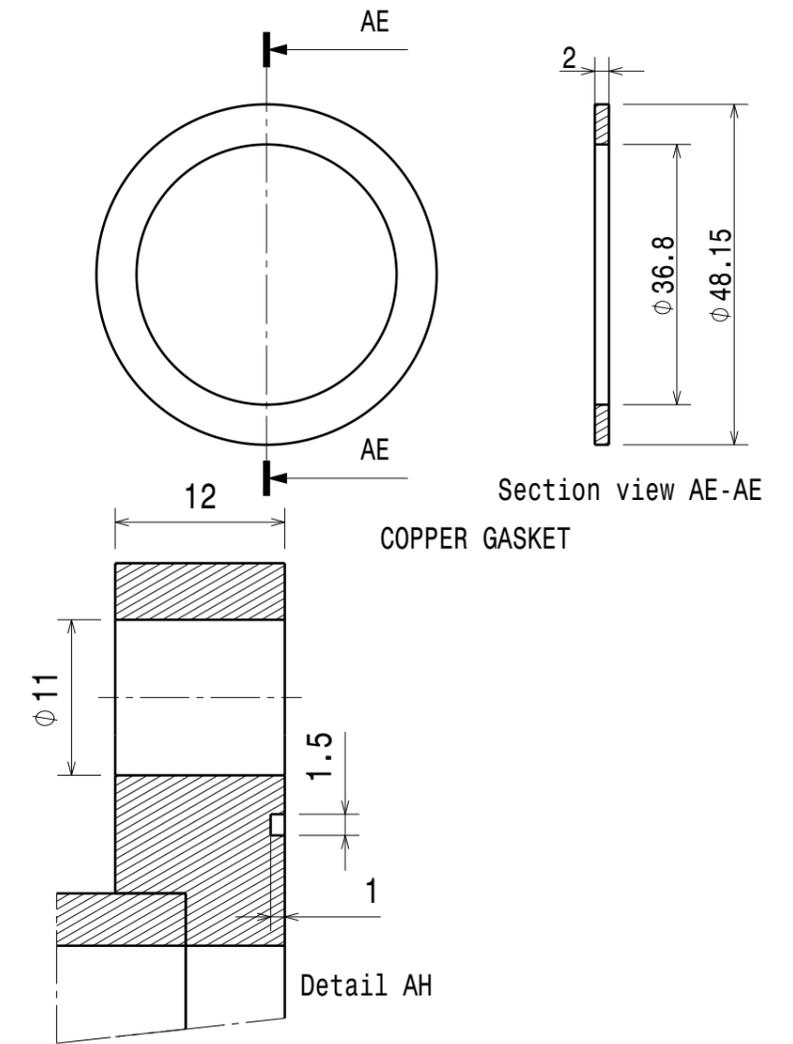
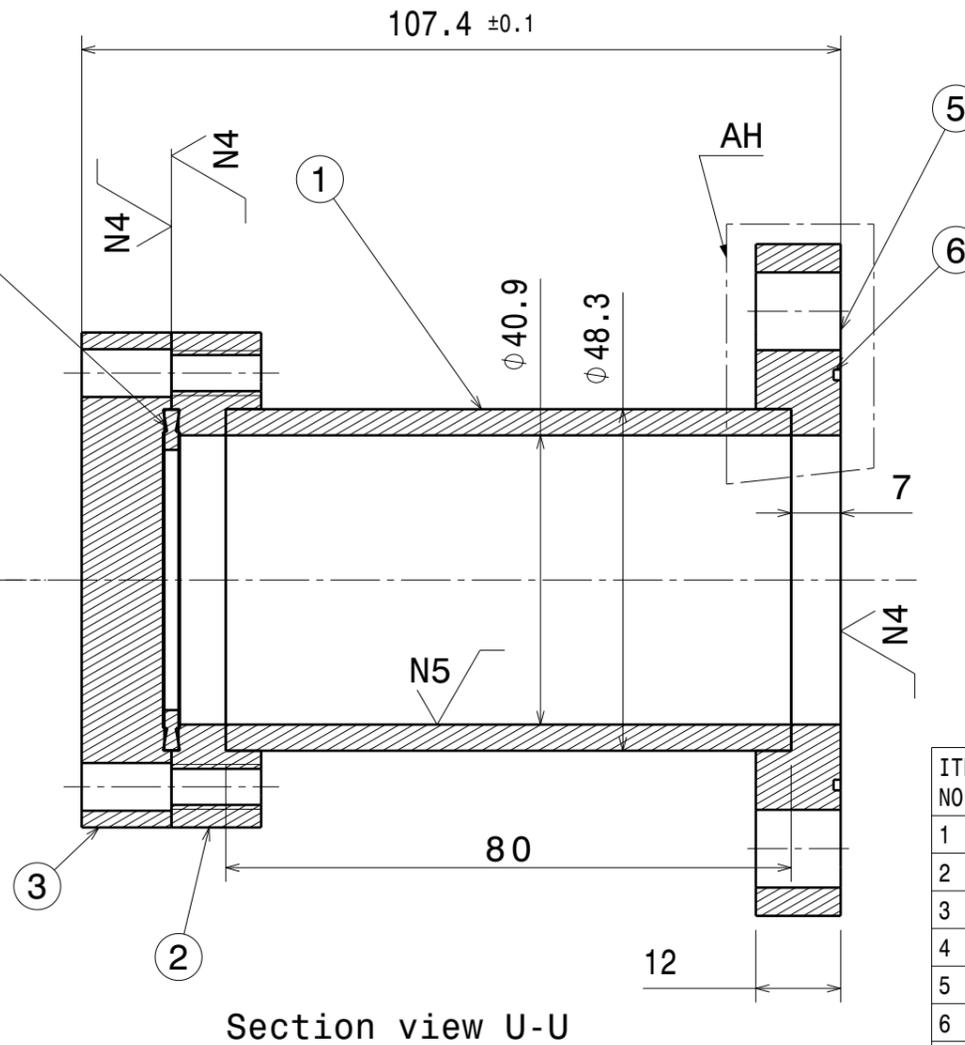
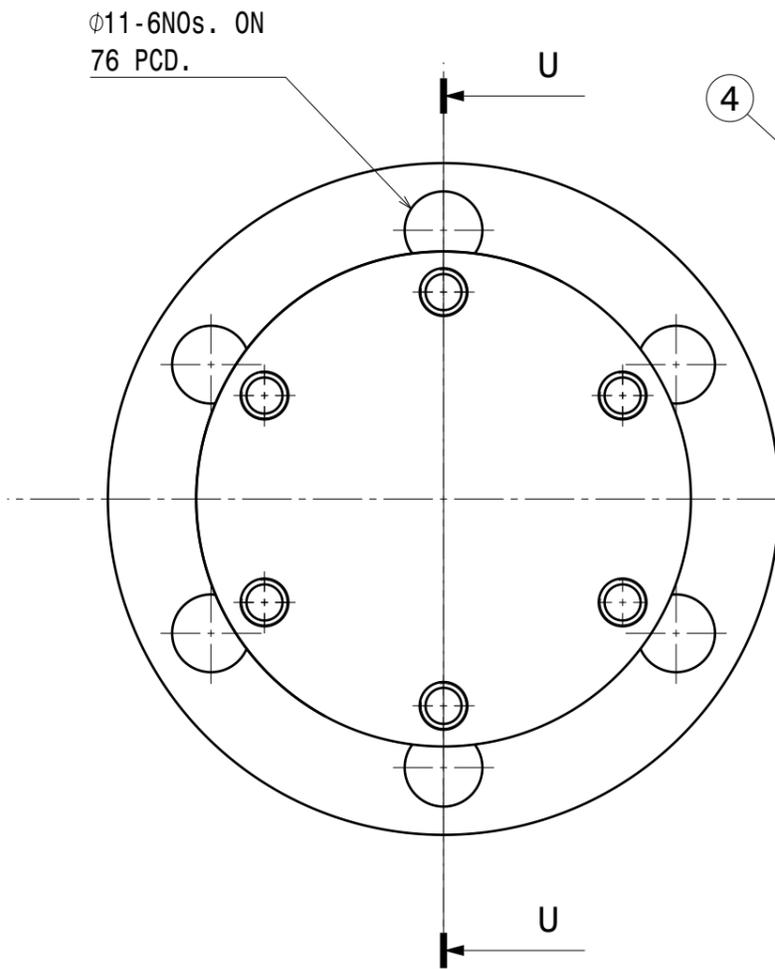


DRG.NO		▽ 8-25	▽▽ 1.6-8	▽▽▽ 0.025-1.6	▽▽▽▽ < 0.025	REVISION COLUMN				RFQ GROUP:		 Institute for Plasma Research प्लाज्मा अनुसंधान संस्थान Bhat, Near Indira Bridge, Gandhinagar 382428, Gujarat (India)				
CO-ORDINATED BY						REV	ZONE	DESCRIPTION	DATE	REMARKS	APPROVED		ALL DIMENSIONS ARE IN 'mm' UNLESS OTHERWISE STATED			
MACHINING DEVIATIONS FOR NON-TOLERANCED DIMENSIONS												SCALE	1:1	DATE	TITLE	
LENGTH IN mm OF SHORTER SIDE OF ANGLES				LENGTH OR DIA	UPTO 6	6-30	30-120	120-315				DRAWN	K.R.R.	27.11.17	TOP PLATE COVER-2	
UPTO 10	10-50	50-120	OVER 120-400									CHECKED	PKC		REF DRG NO:	REV 0
+1°	+0°-30'	+0°-20'	+0°-10'		+0.1	+0.2	+0.3	+0.5				APPROVED	JMK	DRG.NO	IPR/17/A3/RFQ/19030024	SHEET 1 OF 1

NOTE:-

01. ALL SHARP CORNERS SHALL BE ROUNDED OFF.
02. THE FINISH MACHINED/GROUND SURFACES SHALL BE PRESERVED AND PROTECTED SUITABLY TO AVOID ANY DAMAGE DURING HANDLING TRANSIT AND ASEMBLY
03. USE DRILL JIG FOR DRILLING OF HOLES.
04. THREADING SHALL BE AS PER IS4218
05. AFTER MACHINING THE COMPONENT SHALL BE SUBJECTED TO SOLUTION CLEANING OR ULTRASONIC CLEANING AS PER APPROVED PROCEDURE

N8 / N5 / N4



ITEM NO.	DESCRIPTION	MAT	QTY
1	DN50 SCH5 STD PIPE_80L	SS304L	01
2	DN40CF BORED TAPPED FIXED FLANGE	SS304L	01
3	DN40CF FIXED BLANK FLANGE	SS304L	01
4	COPPER ANNELED GASKET FOR CF	COPPER	01
5	FLANGE Φ95x12MM THICK	SS304L	01
6	HELICOFLEX SEAL FOR DN40CF	STD	01
7	1/8" -28 BSP BOLTS ,NUT,WASHER	SS304	06
8	1/4" -28 UNCx30L BOLTS WITH WASHER	SS304	06

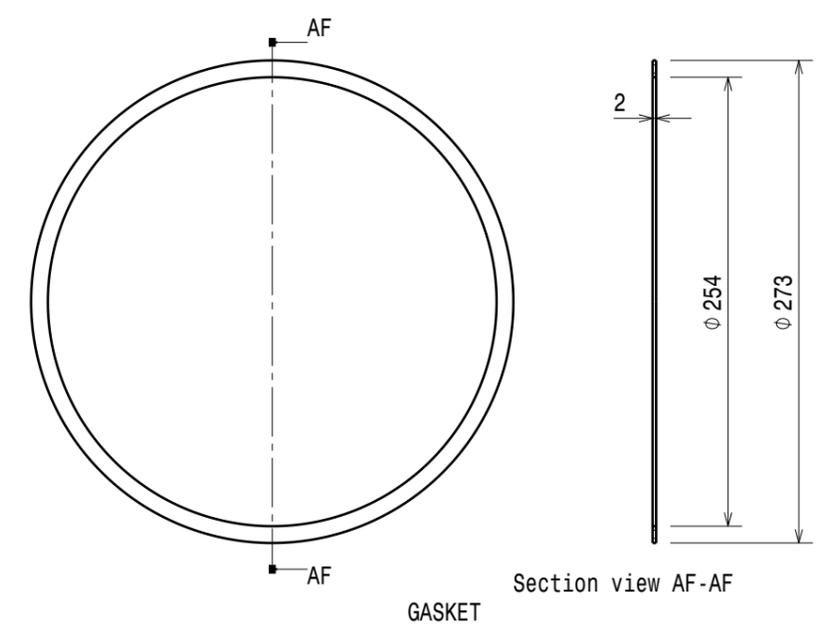
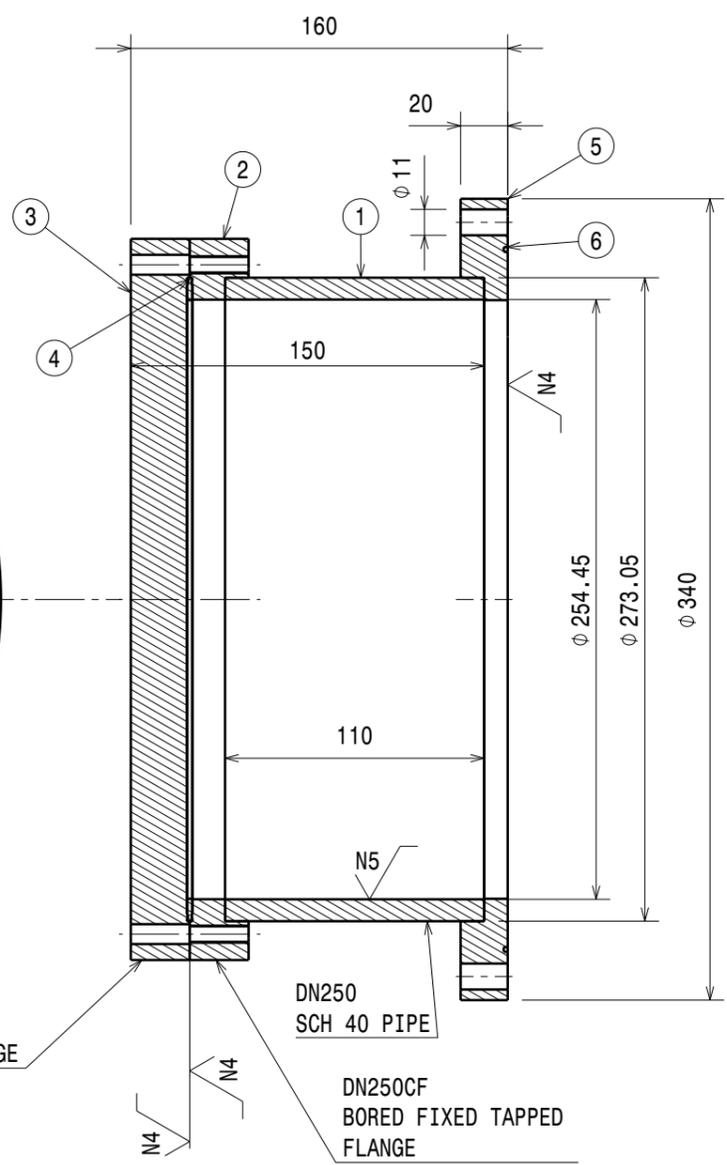
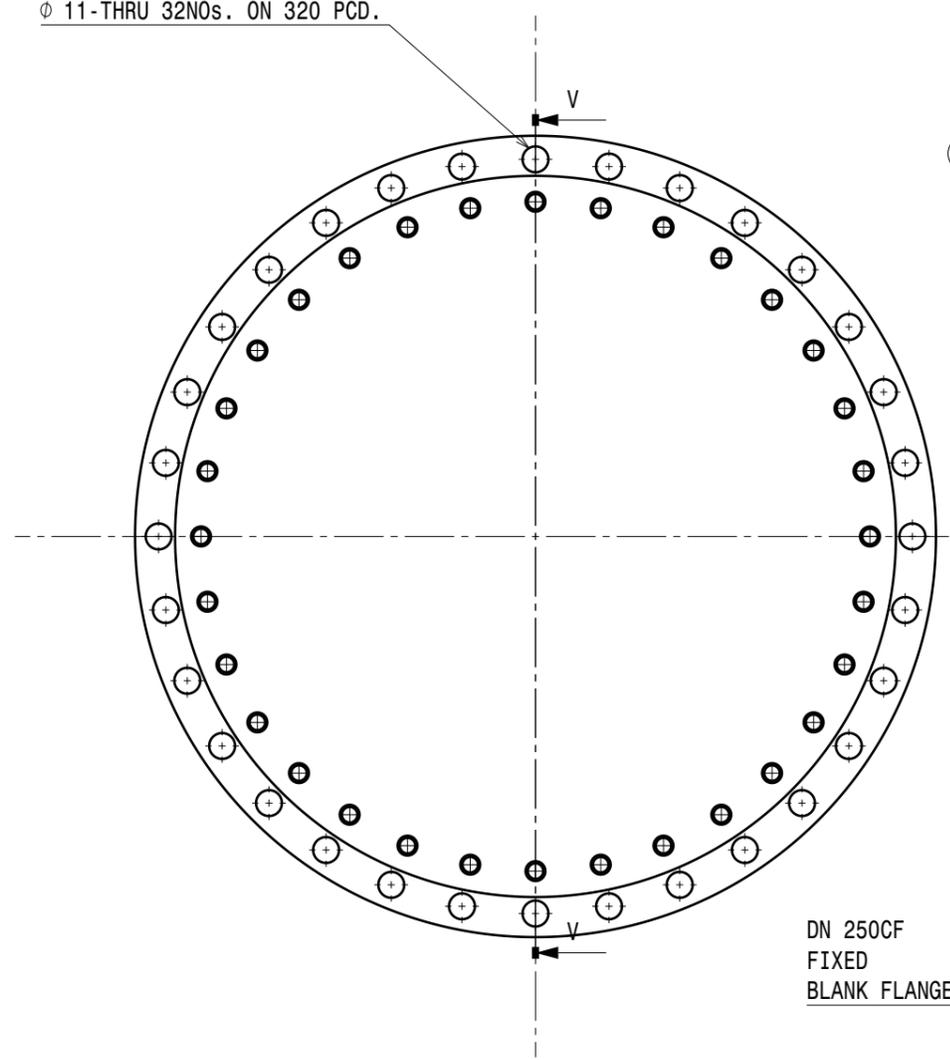
DRG.NO				REVISION COLUMN				RFQ GROUP:			
▽ 8-25 ▽ 1.6-8 ▽ 0.025-1.6 ▽ < 0.025				REV	ZONE	DESCRIPTION	DATE	REMARKS	APPROVED	ALL DIMENSIONS ARE IN 'mm' UNLESS OTHERWISE STATED	
CO-ORDINATED BY										Institute for Plasma Research प्लाज्मा अनुसंधान संस्थान Bhat, Near Indira Bridge, Gandhinagar 382428, Gujarat (India)	
MACHINING DEVIATIONS FOR NON-TOLERANCED DIMENSIONS										SCALE	DATE
LENGTH IN mm OF SHORTER SIDE OF ANGLES				LENGTH	UPTO 6	6-30	30-120	120-315		DRAWN	K.R.R.
UPTO 10	10-50	50-120	OVER 120-400	OR DIA	UPTO 6	6-30	30-120	120-315	CHECKED	PKC	TITLE
+1°	+0°-30'	+0°-20'	+0°-10'		+0.1	+0.2	+0.3	+0.5	APPROVED	JMK	CF40 PORT
											REF DRG NO:
											DRG.NO
											IPR/17/A3/RFQ/19030026
											REV 0
											SHEET 1 OF 1

ALL DIMENSIONS ARE IN MM

N8 / N5 / N4

- NOTE:-
01. ALL SHARP CORNERS SHALL BE ROUNDED OFF.
 02. THE FINISH MACHINED/GROUND SURFACES SHALL BE PRESERVED AND PROTECTED SUITABLY TO AVOID ANY DAMAGE DURING HANDLING TRANSIT AND ASEMBLY
 03. USE DRILL JIG FOR DRILLING OF HOLES.
 04. THREADING SHALL BE AS PER IS4218
 05. AFTER MACHINING THE COMPONENT SHALL BE SUBJECTED TO SOLUTION CLEANING OR ULTRASONIC CLEANING AS PER APPROVED PROCEDURE

Ø 11-THRU 32NOS. ON 320 PCD.



ITEM NO.	DESCRIPTION	MAT	QTY
1	DN250 SCH40 PIPE	SS304L	01
2	DN250CF BORED FIXED TAPPED FLANGE	SS304L	01
3	DN250CF FIXED BLANK FLANGE	SS304L	01
4	COPPER ANNELED GASKET FOR CF	COPPER	01
5	Ø340x20 FLANGE	SS304L	01
6	HELICOFLEX SEAL FOR DN 250CF	STD	01
7	1/8" -28 BSP BOLTS WITH NUTS, WASHERS	SS304	32
8	5/16" -24 UNC x55L BOLTS AND WITH WASHERS	SS304	32

Section view V-V

DRG.NO				REVISION COLUMN				RFQ GROUP:			
▽ 8-25				▽▽ 1.6-8				▽▽▽ 0.025-1.6			
▽▽▽ < 0.025				REV	ZONE	DESCRIPTION	DATE	REMARKS	APPROVED		
CO-ORDINATED BY								ALL DIMENSIONS ARE IN 'mm' UNLESS OTHERWISE STATED			
MACHINING DEVIATIONS FOR NON-TOLERANCED DIMENSIONS								SCALE	1:1	DATE	
LENGTH IN mm OF SHORTER SIDE OF ANGLES				LENGTH	UPTO 6	6-30	30-120	120-315	DRAWN		
				OR DIA	UPTO 10	10-50	50-120	OVER 120-400	K.R.R. 01/12/17		
					UPTO 10	10-50	50-120	OVER 120-400	CHECKED		
					UPTO 10	10-50	50-120	OVER 120-400	PKC		
					UPTO 10	10-50	50-120	OVER 120-400	APPROVED		
					UPTO 10	10-50	50-120	OVER 120-400	JMK		
								REF DRG NO:		REV 0	
								DRG.NO		IPR/17/A3/RFQ/19030027	SHEET 1 OF 1

Institute for Plasma Research
 प्लाज्मा अनुसंधान संस्थान
 Bhat, Near Indira Bridge, Gandhinagar 382428, Gujarat (India)

DN250 VACUUM PORT

DATE: 01/12/17

CHECKED: PKC

APPROVED: JMK

REF DRG NO:

DRG.NO: IPR/17/A3/RFQ/19030027

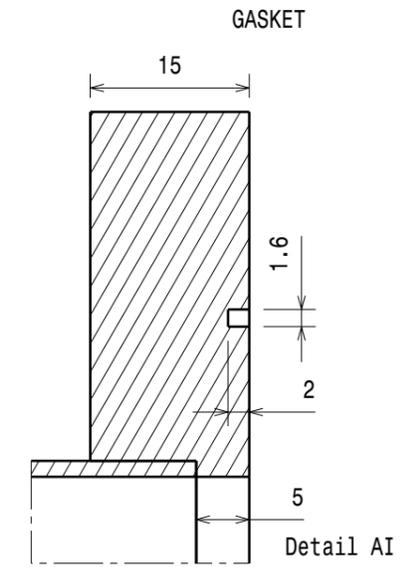
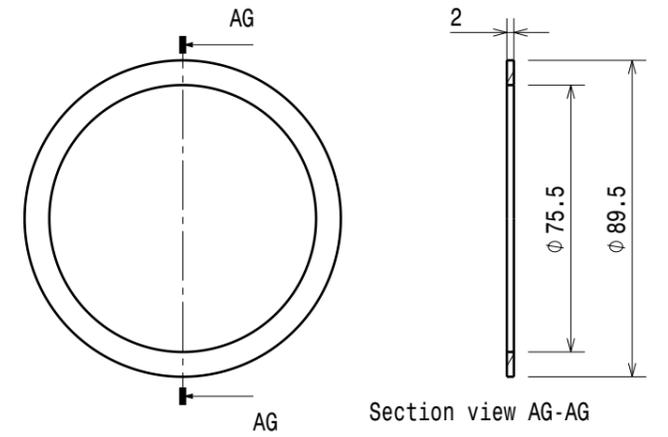
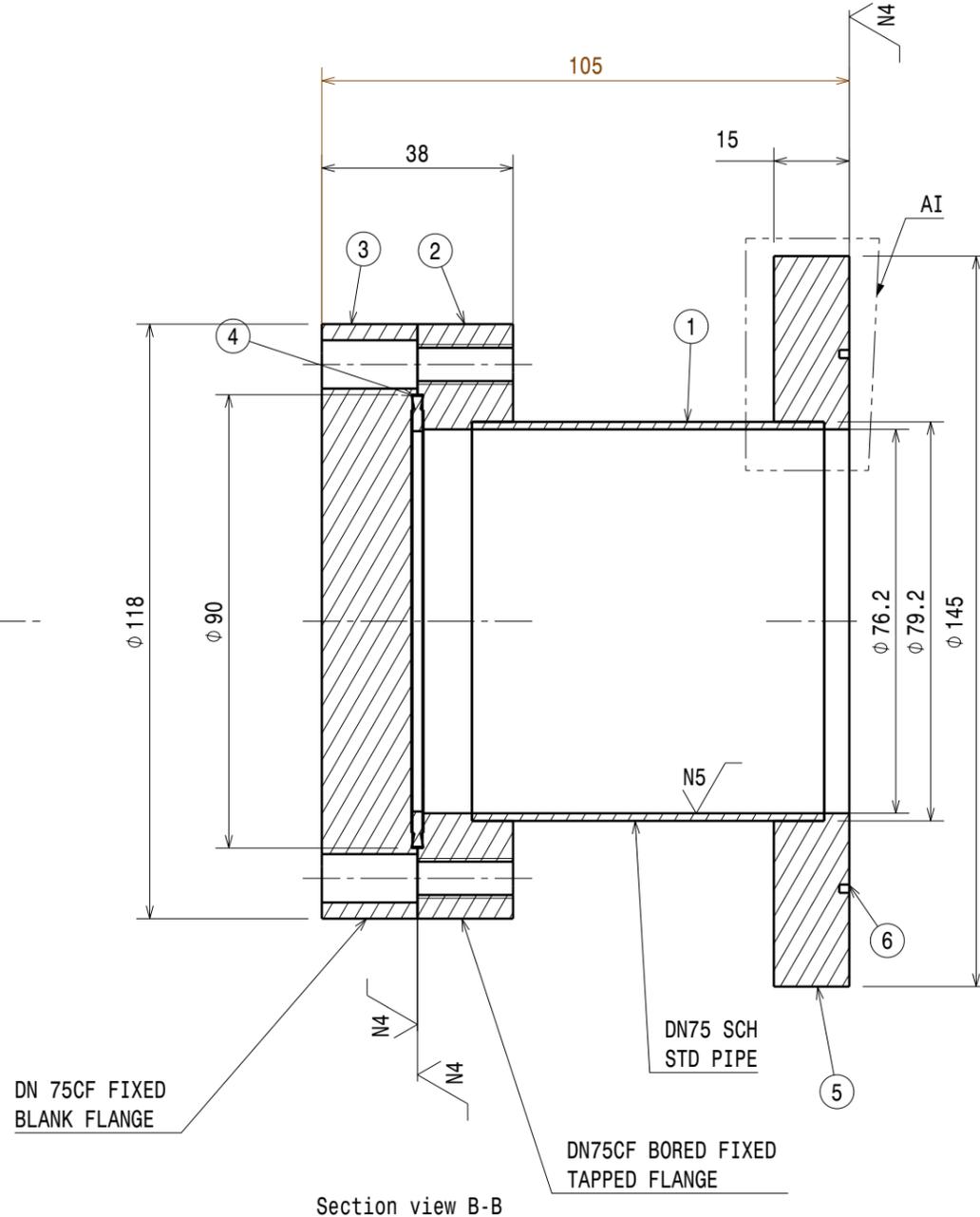
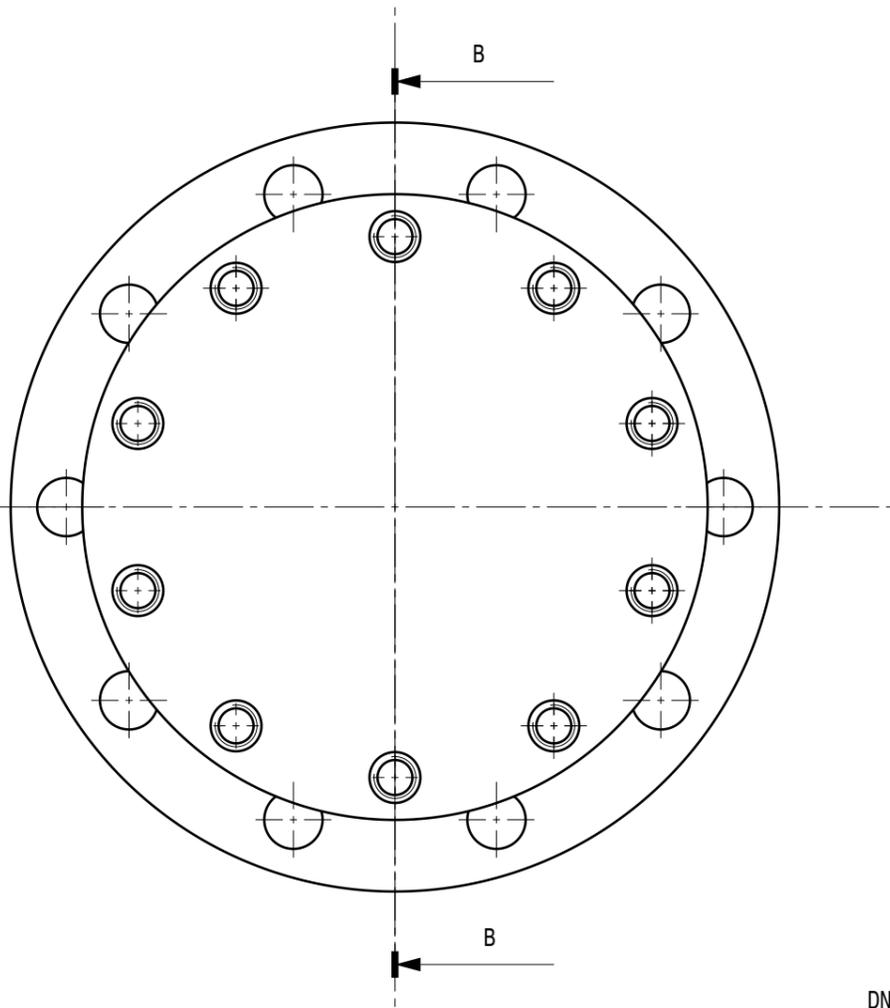
REV: 0

SHEET 1 OF 1

- NOTE:-
01. ALL SHARP CORNERS SHALL BE ROUNDED OFF.
 02. THE FINISH MACHINED/GROUND SURFACES SHALL BE PRESERVED AND PROTECTED SUITABLY TO AVOID ANY DAMAGE DURING HANDLING TRANSIT AND ASEMBLY
 03. USE DRILL JIG FOR DRILLING OF HOLES.
 04. THREADING SHALL BE AS PER IS4218
 05. AFTER MACHINING THE COMPONENT SHALL BE SUBJECTED TO SOLUTION CLEANING OR ULTRASONIC CLEANING AS PER APPROVED PROCEDURE

N8 / N5 / N4

ALL DIMENSIONS ARE IN MM



ITEM NO.	DESCRIPTION	MAT	QTY
01	DN 75CF FIXED BLANK FLANGE	SS304L	01
02	DN 75CF BORED FIXED TAPPED FLANGE	SS304L	01
03	DN75 SCH STD PIPE	SS304L	01
04	COPPER ANNELED GASKET FOR CF	COPPER	01
05	Ø145x15 FLANGE	SS304L	01
06	HELICOFLEX SEAL FOR DN75 CF	STD	01
07	1/8" -28 BSP BOLTS WITH NUTS AND WASHERS	SS304	10
08	5/16-24 UNCx45L BOLTS WITH WASHER	SS304	10

DRG.NO	▽ 8-25	▽▽ 1.6-8	▽▽▽ 0.025-1.6	▽▽▽▽ < 0.025	REVISION COLUMN				RFQ GROUP:		 Institute for Plasma Research प्लाज्मा अनुसंधान संस्थान Bhat, Near Indira Bridge, Gandhinagar 382428, Gujarat (India)	
CO-ORDINATED BY					REV	ZONE	DESCRIPTION	DATE	REMARKS	APPROVED		ALL DIMENSIONS ARE IN 'mm' UNLESS OTHERWISE STATED SCALE: 1:1 DATE: 04/12/17 DRAWN: K.R.R. CHECKED: PKC APPROVED: JMK
MACHINING DEVIATIONS FOR NON-TOLERANCED DIMENSIONS											REF DRG NO:	REV 0
LENGTH IN mm OF SHORTER SIDE OF ANGLES				LENGTH OR DIA	UPTO 6	6-30	30-120	120-315			DRG.NO	SHEET 1 OF 1
UPTO 10	10-50	50-120	OVER 120-400		+0.1	+0.2	+0.3	+0.5			IPR/17/A3/RFQ/19030028	
+1°	+0°-30'	+0°-20'	+0°-10'									

4

3

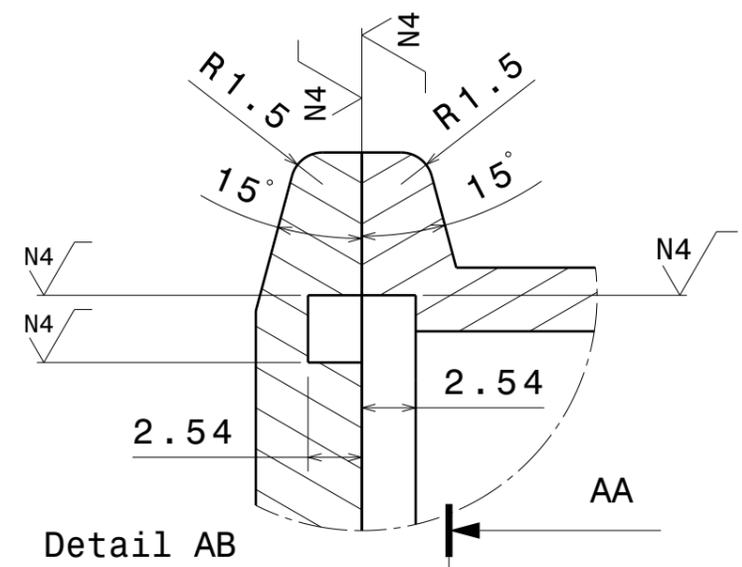
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4

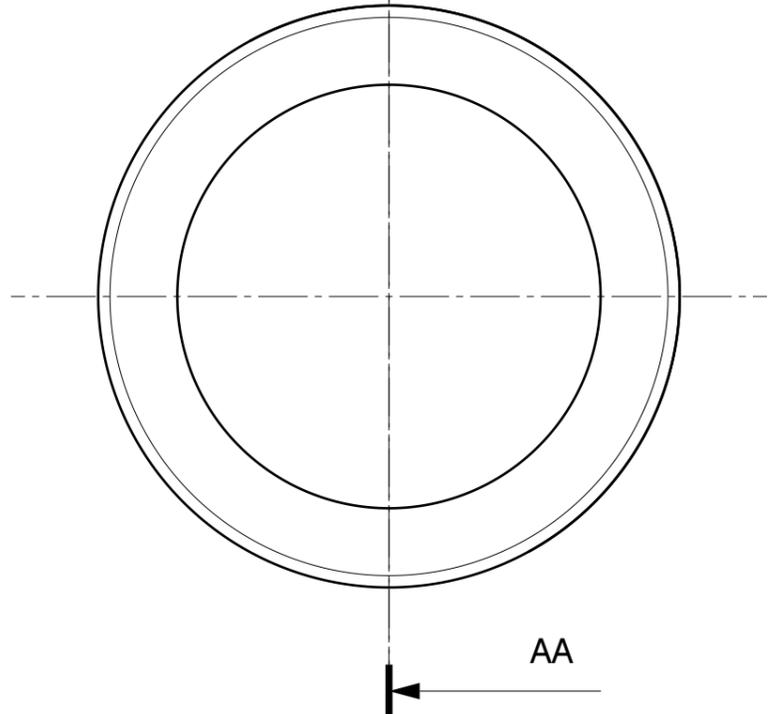
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2

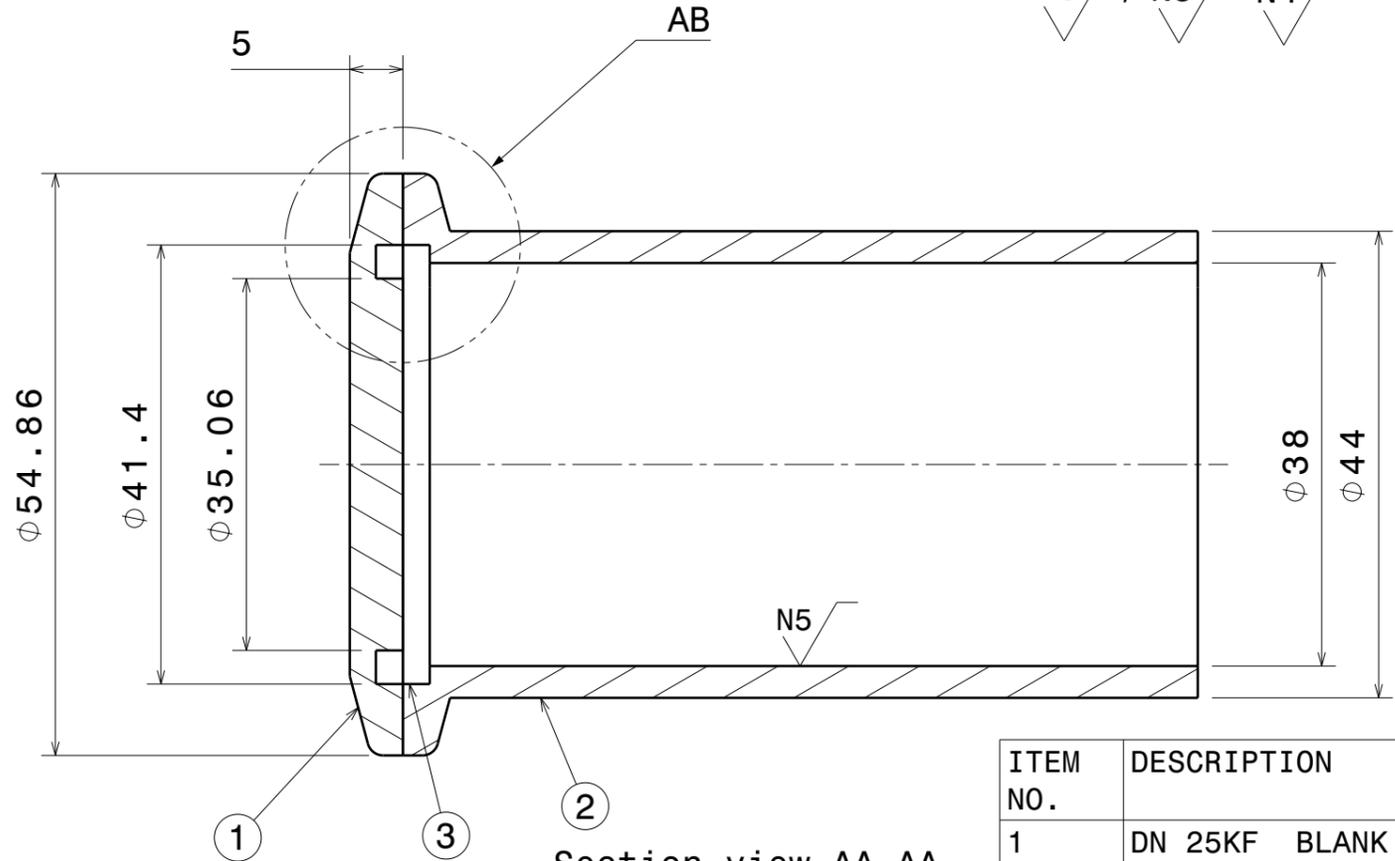
NOTE:-
 01. ALL SHARP CORNERS SHALL BE ROUNDED OFF.
 05. AFTER MACHINING THE COMPONENT SHALL BE SUBJECTED TO SOLUTION CLEANING OR ULTRASONIC CLEANING AS PER APPROVED PROCEDURE



Detail AB



AA



Section view AA-AA

N8 / N5 N4

ITEM NO.	DESCRIPTION	MAT	QTY
1	DN 25KF BLANK FLANGE	AL6061-T6	01
2	DN 25KF PIPE WITH FLANGE	AL6061-T6	01
3	CENTERING RING SS WITH O-RING	VITON	01
4	CLAMP	STD	01

DRG.NO	▽ 8-25	▽▽ 1.6-8	▽▽▽ 0.025-1.6	▽▽▽▽ < 0.025	REVISION COLUMN				RFQ GROUP:		 Institute for Plasma Research प्लाज्मा अनुसंधान संस्थान Bhat, Near Indira Bridge, Gandhinagar 382428, Gujarat (India)		
CO-ORDINATED BY					REV	ZONE	DESCRIPTION	DATE	REMARKS	APPROVED	ALL DIMENSIONS ARE IN 'mm' UNLESS OTHERWISE STATED SCALE: 1:1 DATE: 06/12/17 DRAWN: K.R.R.		
MACHINING DEVIATIONS FOR NON-TOLERANCED DIMENSIONS											TITLE: DN 40KF PORT REF DRG NO:		
LENGTH IN mm OF SHORTER SIDE OF ANGLES				LENGTH OR DIA	UPTO 6	6-30	30-120	120-315				CHECKED:	DRG.NO: IPR/17/A3/RFQ/19030029
UPTO 10	10-50	50-120	OVER 120-400		+0.1	+0.2	+0.3	+0.5				APPROVED:	REV 0 SHEET 1 OF 1
+1°	+0°-30'	+0°-20'	+0°-10'										

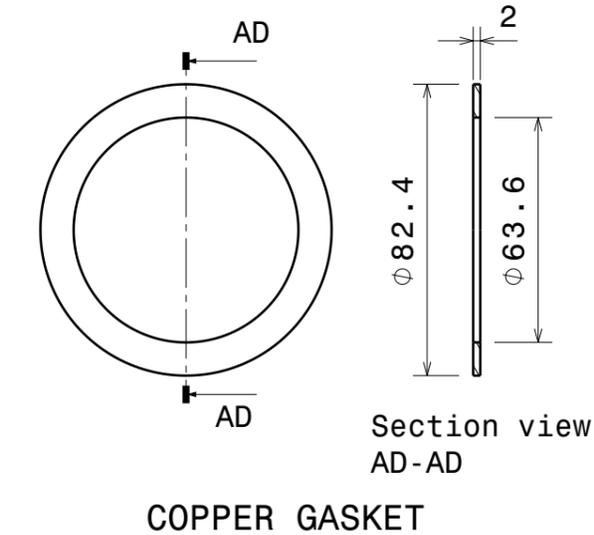
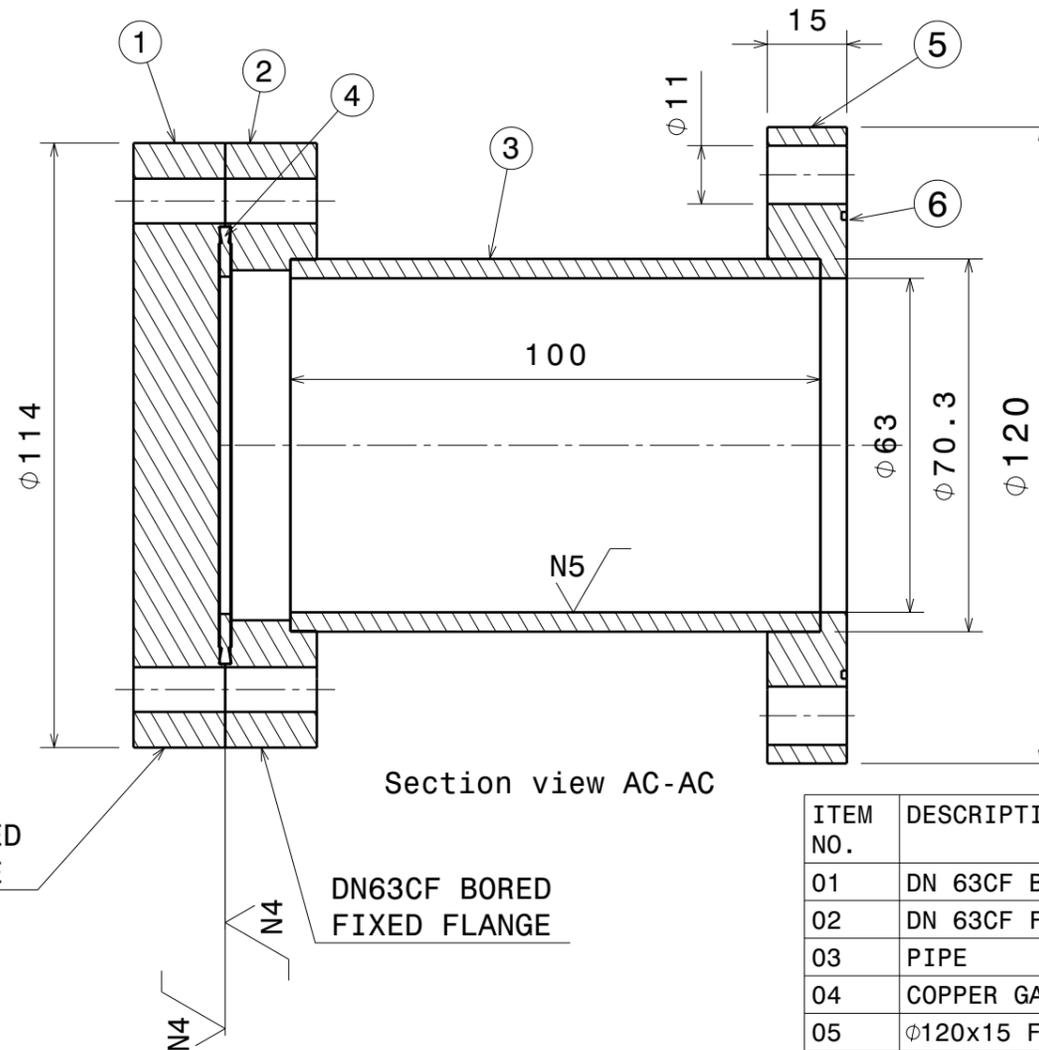
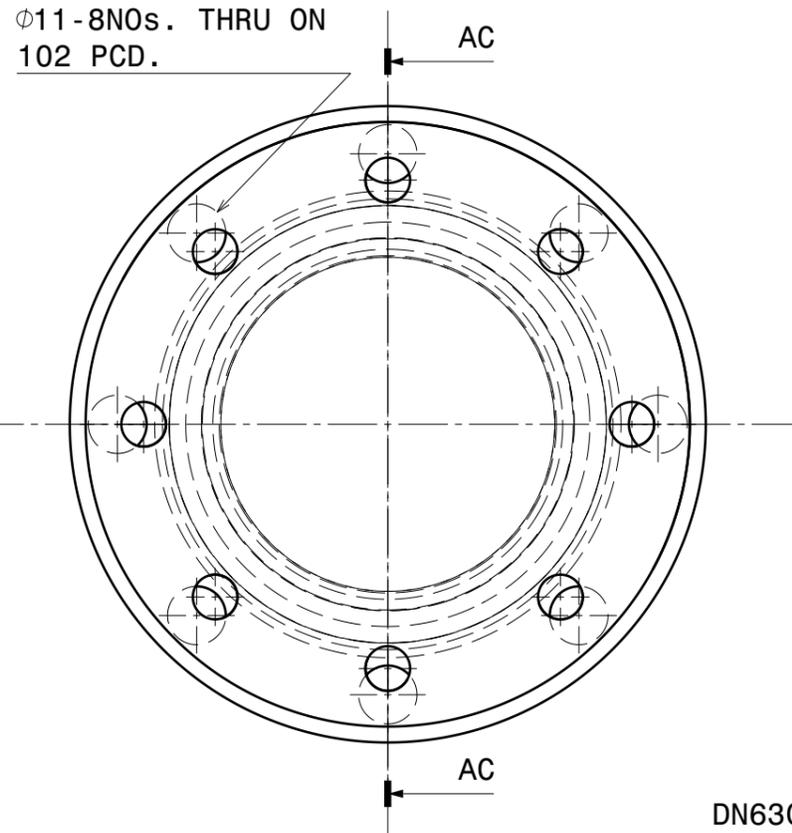
NOTE:-

01. ALL SHARP CORNERS SHALL BE ROUNDED OFF.
02. THE FINISH MACHINED/GROUND SURFACES SHALL BE PRESERVED AND PROTECTED SUITABLY TO AVOID ANY DAMAGE DURING HANDLING TRANSIT AND ASEMBLY
03. USE DRILL JIG FOR DRILLING OF HOLES.
04. THREADING SHALL BE AS PER IS4218
05. AFTER MACHINING THE COMPONENT SHALL BE SUBJECTED TO SOLUTION CLEANING OR ULTRASONIC CLEANING AS PER APPROVED PROCEDURE

ALL DIMENSIONS ARE IN MM

N8 / N5 N4

Ø11-8NOs. THRU ON 102 PCD.



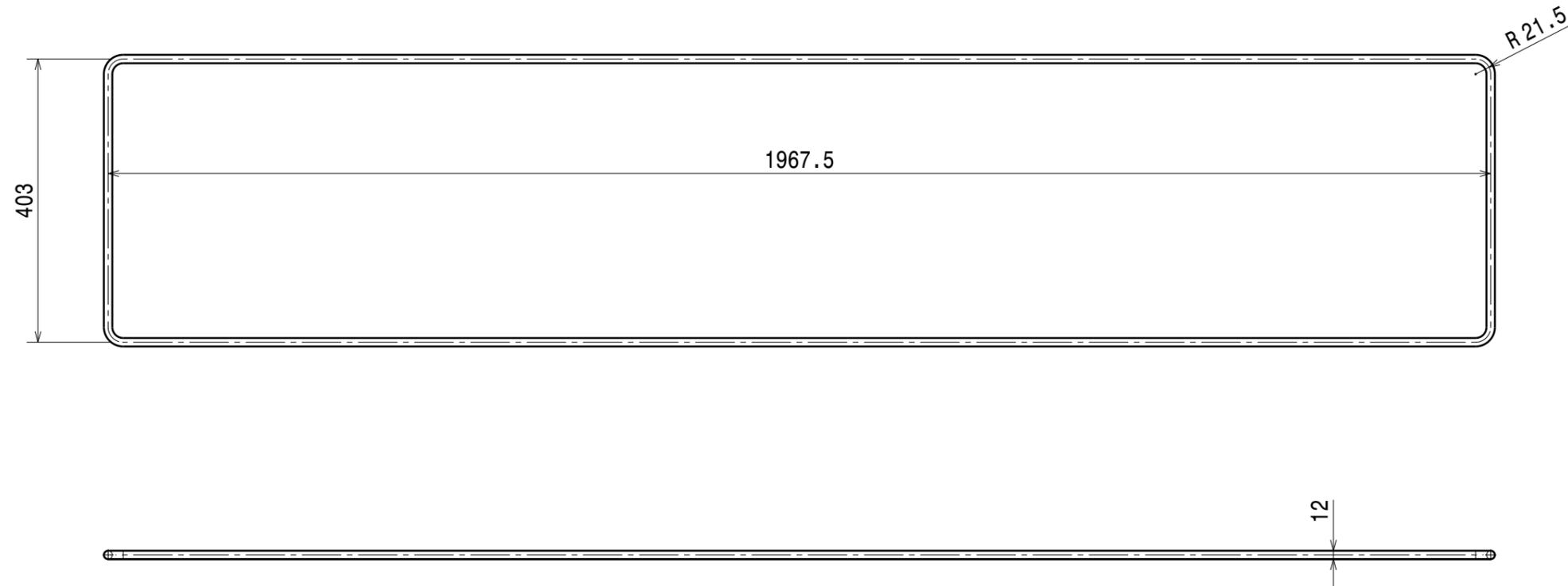
DN63CF FIXED BANK FLANGE

DN63CF BORED FIXED FLANGE

COPPER GASKET

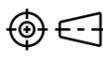
ITEM NO.	DESCRIPTION	MAT	QTY
01	DN 63CF BLANK FLANGE	SS304L	01
02	DN 63CF FIXED FLANGE	SS304L	01
03	PIPE	SS304L	01
04	COPPER GASKET	COPPER	01
05	Ø120x15 FLANGE	SS304L	01
06	HELICOFLEX SEAL FOR DN63CF	STD	01
07	1/8" -28 BSP NUTS WITH BOLTS WITH NUTS	SS304	08
05	M8x60L BOLTS WITH DOUBLE NUTS AND WASHERS	SS304	08

DRG.NO	▽ 8-25	▽▽ 1.6-8	▽▽▽ 0.025-1.6	▽▽▽▽ < 0.025	REVISION COLUMN				RFQ GROUP:		 Institute for Plasma Research प्लाज्मा अनुसंधान संस्थान Bhat, Near Indira Bridge, Gandhinagar 382428, Gujarat (India)					
CO-ORDINATED BY					REV	ZONE	DESCRIPTION	DATE	REMARKS	APPROVED		ALL DIMENSIONS ARE IN 'mm' UNLESS OTHERWISE STATED				
MACHINING DEVIATIONS FOR NON-TOLERANCED DIMENSIONS											SCALE	1:1	DATE	TITLE		
LENGTH IN mm OF SHORTER SIDE OF ANGLES				LENGTH OR DIA	UPTO 6	6-30	30-120	120-315				DRAWN	K.R.R.	05.12.17	DN 63CF PORT	
UPTO 10	10-50	50-120	OVER 120-400		UPTO 10	10-50	50-120	OVER 120-400				CHECKED	PKC		REF DRG NO:	
+1°	+0°-30'	+0°-20'	+0°-10'		+0.1	+0.2	+0.3	+0.5			APPROVED	JMK		DRG.NO	IPR/17/A3/RFQ/19030030	REV 0
														SHEET 1 OF 1		



NOTES: DRAWING FOR REFERENCE ONLY
ACTUAL O-RING SHOULD MATCH WITH GROOVE

MAT: VITON

DRG.NO		▽ 8-25	▽▽ 1.6-8	▽▽▽ 0.025-1.6	▽▽▽▽ < 0.025	REVISION COLUMN				RFQ GROUP:		 Institute for Plasma Research प्लाज्मा अनुसंधान संस्थान Bhat, Near Indira Bridge, Gandhinagar 382428, Gujarat (India)					
CO-ORDINATED BY						REV	ZONE	DESCRIPTION	DATE	REMARKS	APPROVED			ALL DIMENSIONS ARE IN 'mm' UNLESS OTHERWISE STATED			
MACHINING DEVIATIONS FOR NON-TOLERANCED DIMENSIONS												SCALE	1:1	DATE	TITLE		
LENGTH IN mm OF SHORTER SIDE OF ANGLES				LENGTH OR DIA	UPTO 6	6-30	30-120	120-315				DRAWN	K.R.R.	09.01.18	 O-RING 4 FOR BOTTOM PLATE-2		
UPTO 10	10-50	50-120	OVER 120-400									CHECKED	PKC			REF DRG NO:	REV 0
+1°	+0°-30'	+0°-20'	+0°-10'		+0.1	+0.2	+0.3	+0.5				APPROVED	JMK		DRG.NO	IPR/17/A3/RFQ/19030031	SHEET 1 OF 1

