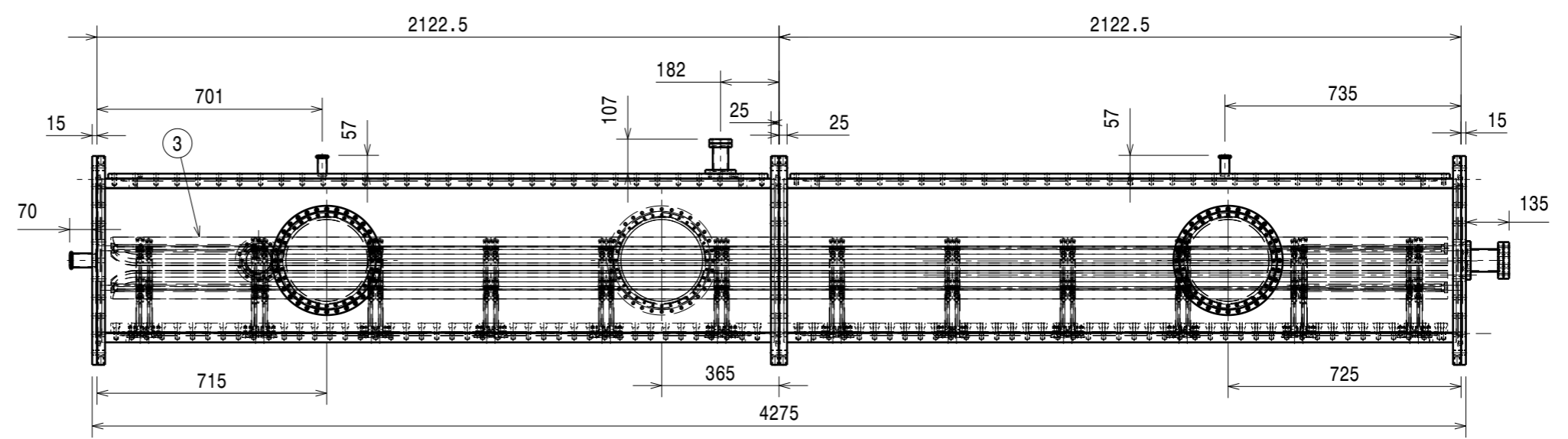
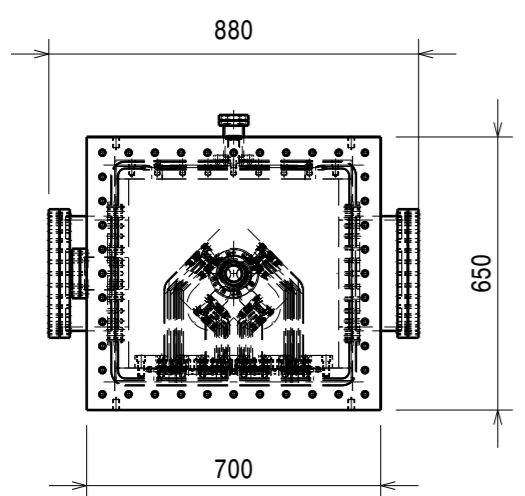


- ASSEMBLY NOTES:-
- ENOUGH CARE SHALL BE TAKEN TO AVOID DAMAGE (DENT AND SCRATCHES) DURING HANDLING AND STORING OF RAW MATERIAL, SEMI FINISHED PRODUCT AND FINISHED PRODUCTS.
 - MATERIALS, WELDING PROCEDURES, QUALIFICATION REQUIREMENTS, TESTING AND EXAMINATION ETC., SHALL BE AS PER RELEVANT APPROVED SPECIFICATIONS.
 - ABRASIVE SUCCESSFUL ASSEMBLY, ACCEPTANCE TESTS SHALL BE CARRIED AS PER APPROVED.
 - AFTER SUCCESSFUL ASSEMBLY, ACCEPTANCE TESTS SHALL BE CARRIED AS PER APPROVED PROCEDURE. BE CARRIED AS PER APPROVED PROCEDURE.
 - ALL SHARP CORNER SHALL BE ROUNDED OFF.
 - USE FIXTURES DURING WELDING, MACHINING AND HEAT TREATMENT.
 - EDGE PREPARATION OF WELD JOINT BETWEEN END FLANGE AND SIDE PLATE, TOP PLATE, BOTTOM PLATE.
 - AFTER SUCCESSFUL TRAIL ASSEMBLY, ACCEPTANCE TEST AND BEFORE REMOVAL OF ASSEMBLY, THE REFERENCE POINT, CO-ORDINATES, MATCH MARKING BETWEEN ROD, STEM, BASE PLATE AND VACUUM VESSEL SHALL BE DONE AS REFERENCE FOR SITE ASSEMBLY.

| ITEM NO. | PART NAME | MATERIAL | DESCRIPTION | QTY |
|----------|----------------------------------|----------------|---------------|-----|
| 01 | VACUUM VESSEL -1 | AS PER DRAWING | DRG.#19030002 | 01 |
| 02 | VACUUM VESSEL -2 | AS PER DRAWING | DRG.#19030003 | 01 |
| 03 | ROD STEM AND BASE PLATE ASSEMBLY | AS PER DRAWING | DRG.#19020001 | 01 |
| 04 | END FLANGE COVER-1 | AS PER DRAWING | DRG.#19030007 | 01 |
| 05 | END FLANGE COVER-2 | AS PER DRAWING | DRG.#19030008 | 01 |



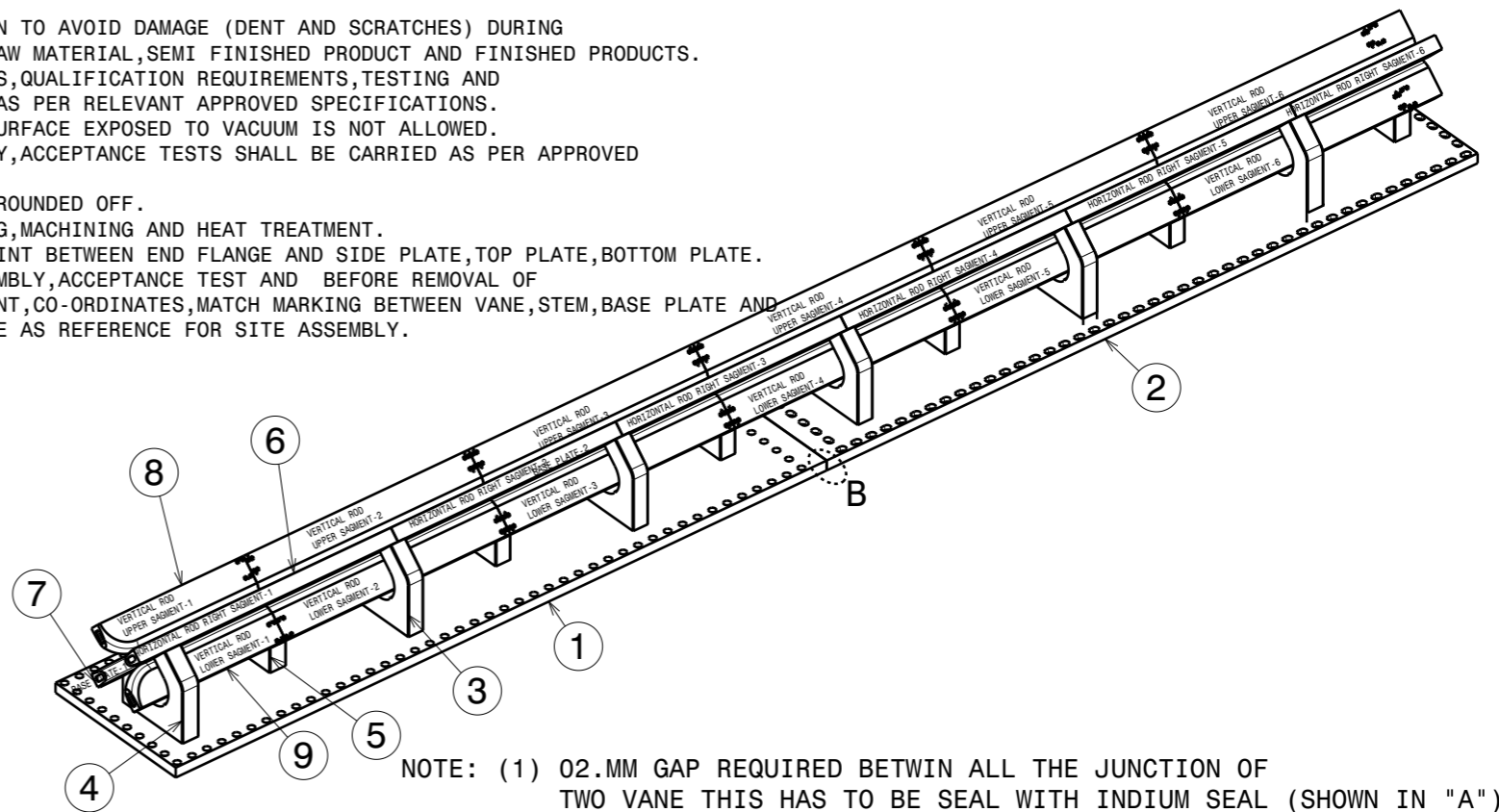
| DRG.NO | | | | REVISION COLUMN | | | | RFQ GROUP: | | | | | | | | | | |
|--|---------|---------|--------------|-----------------|--------|-------------|--------|---------------|---------------|------------|--------------------------------|---------------------|----------------|--|--|--|--|--|
| ▽ 8-25 | | | | ▽▽ 1.6-8 | | | | ▽▽▽ 0.025-1.6 | | | | ▽▽▽▽ < 0.025 | | | | ALL DIMENSIONS ARE IN 'mm' UNLESS OTHERWISE STATED | | |
| CO-ORDINATED BY | | | | REV | ZONE | DESCRIPTION | DATE | REMARKS | APPROVED | SCALE: 1:1 | | | DATE: 01/08/17 | | | | | |
| MACHINING DEVIATIONS FOR NON-TOLERANCED DIMENSIONS | | | | | | | | | | | | TITLE: RFQ ASSEMBLY | | | | | | |
| LENGTH IN mm OF SHORTER SIDE OF ANGLES | | | | LENGTH OR DIA | UPTO 6 | 6-30 | 30-120 | 120-315 | DRAWN: K.R.R. | | | REF DRG NO: | | | | | | |
| UPTO 10 | 10-50 | 50-120 | OVER 120-400 | | +0.1 | +0.2 | +0.3 | +0.5 | CHECKED: PKC | | | REV 0 | | | | | | |
| +1° | +0°-30' | +0°-20' | +0°-10' | | | | | APPROVED: JMK | | | DRG.NO: IPR/17/A3/RFQ/19010001 | | | | | | | |
| | | | | | | | | | | | | SHEET 1 OF 1 | | | | | | |

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

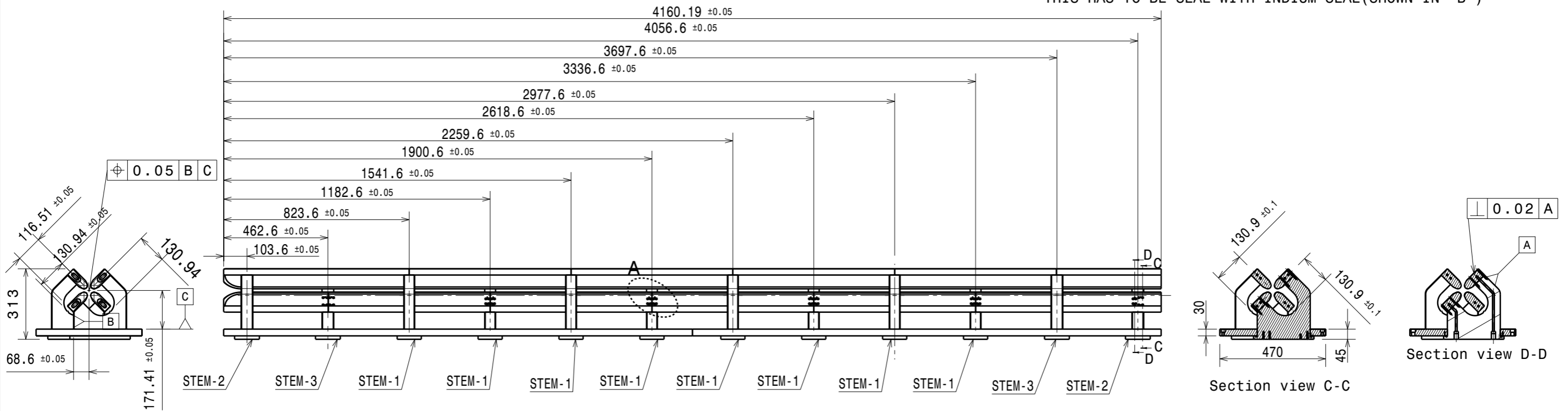
| ITEM NO. | PART NAME | MATERIAL | DESCRIPTION | QTY |
|----------|---|--------------------|---------------------------------|-----|
| 01 | BASE PLATE-1 | AS PER DRG. | DRG.#.19020004 | 01 |
| 02 | BASE PLATE-2 | AS PER DRG. | DRG.#.19020003 | 01 |
| 03 | STEM-1 | AS PER DRG. | DRG.#.19020007 | 08 |
| 04 | STEM-2 | AS PER DRG. | DRG.#.19020008 | 02 |
| 05 | STEM-3 | AS PER DRG. | DRG.#.19020009 | 02 |
| 06 | HORIZONTAL ROD RIGHT(1 TO 6) | AS PER DRG. | DRG.#.19020017 TO 19020022 | 06 |
| 07 | HORIZONTAL ROD LEFT(1 TO 6) | AS PER DRG. | DRG.#.19020011 TO 19020016 | 06 |
| 08 | VERTICAL ROD UPPER(1 TO 6) | AS PER DRG. | DRG.#.19020030 TO 19020036 | 06 |
| 09 | VERTICAL ROD LOWER(1 TO 6) | AS PER DRG. | DRG.#.19020023 TO 19020029 | 06 |
| 10 | 1/8"-28 BSPx25L ALLEN BOLTS WITH WASHER | SS304 | BASE PLATE TO STEM | 160 |
| 11 | M5x35L BOLTS WITH WASHERS | SS304 | STEM TO BASE PLATE,VANE TO STEM | 100 |
| 12 | Ø5 DOWEL PIN | SS304 | STEM TO BASE PLATE | 30 |
| 13 | Ø5 DOWEL PIN | SS304 | ROD TO STEM | 55 |
| 14 | DOUBTY SEAL | VITON WITH SS RING | STEM TO VANE | 50 |

ASSEMBLY NOTES:-

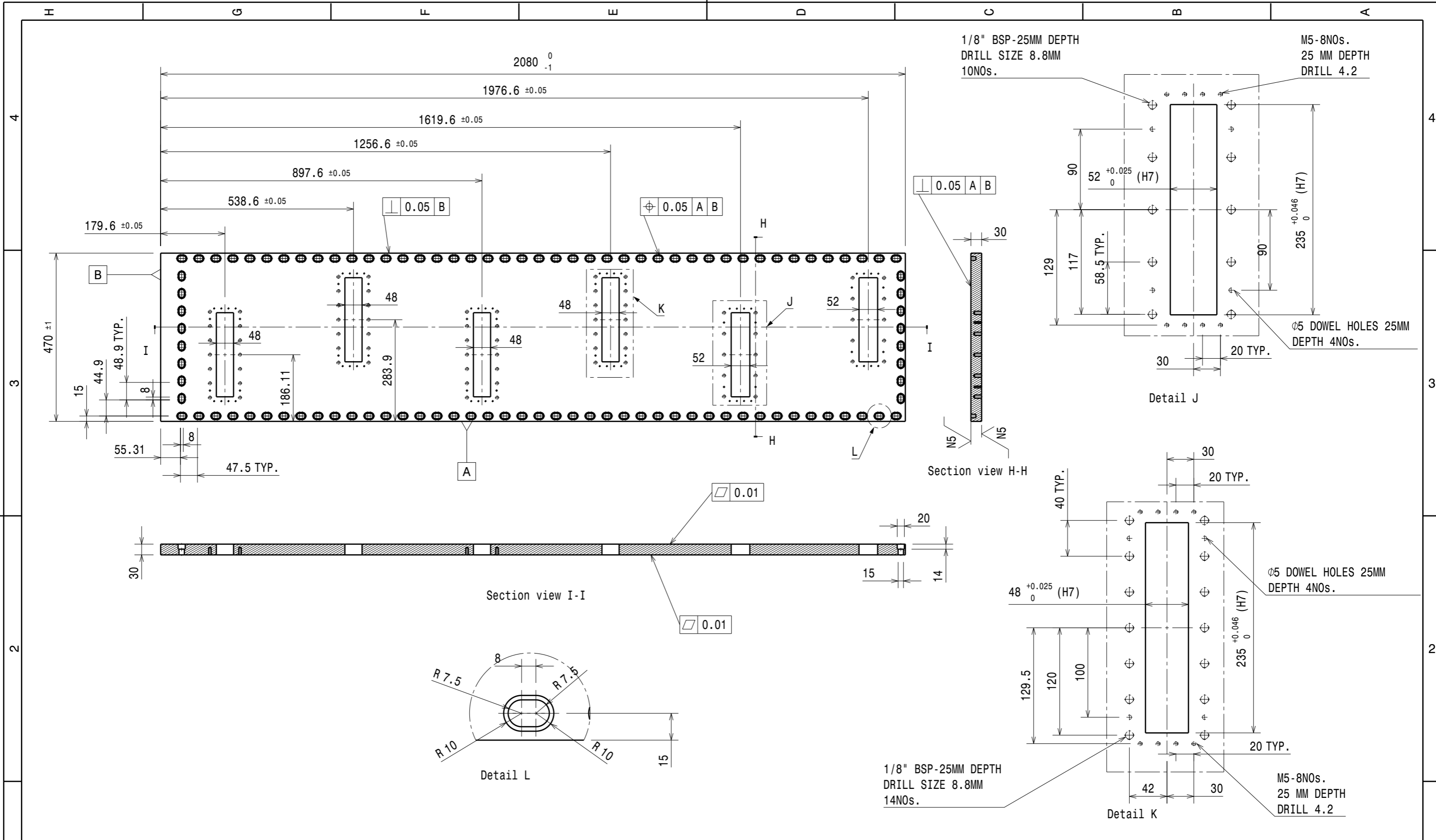
- ENOUGH CARE SHALL BE TAKEN TO AVOID DAMAGE (DENT AND SCRATCHES) DURING HANDLING AND STORING OF RAW MATERIAL, SEMI FINISHED PRODUCT AND FINISHED PRODUCTS.
- MATERIALS, WELDING PROCEDURES, QUALIFICATION REQUIREMENTS, TESTING AND EXAMINATION ETC., SHALL BE AS PER RELEVANT APPROVED SPECIFICATIONS.
- ABRASIVE CLEANING OF THE SURFACE EXPOSED TO VACUUM IS NOT ALLOWED.
- AFTER SUCCESSFUL ASSEMBLY, ACCEPTANCE TESTS SHALL BE CARRIED AS PER APPROVED PROCEDURE.
- ALL SHARP CORNER SHALL BE ROUNDED OFF.
- USE FIXTURES DURING WELDING, MACHINING AND HEAT TREATMENT.
- EDGE PREPARATION OF WELD JOINT BETWEEN END FLANGE AND SIDE PLATE, TOP PLATE, BOTTOM PLATE.
- AFTER SUCCESSFUL TRAIL ASSEMBLY, ACCEPTANCE TEST AND BEFORE REMOVAL OF ASSEMBLY, THE REFERENCE POINT, CO-ORDINATES, MATCH MARKING BETWEEN VANE, STEM, BASE PLATE AND VACUUM VESSEL SHALL BE DONE AS REFERENCE FOR SITE ASSEMBLY.



NOTE: (1) 02.MM GAP REQUIRED BETWEEN ALL THE JUNCTION OF TWO VANE THIS HAS TO BE SEAL WITH INDIUM SEAL (SHOWN IN "A")
 (2) 2MM GAP REQUIRED BETWEEN TWO BASE PLATE THIS HAS TO BE SEAL WITH INDIUM SEAL (SHOWN IN "B")



| DRG. NO | | | | REVISION COLUMN | | | | RFQ. GROUP: | |
|--|--|--|--|--|------|-------------|------|---|----------|
| ▽ 8-25 | | | | REV | ZONE | DESCRIPTION | DATE | REMARKS | APPROVED |
| ▽▽ 1.6-8 | | | | | | | | | |
| ▽▽▽ 0.025-1.6 | | | | | | | | | |
| ▽▽▽▽ < 0.025 | | | | | | | | | |
| CO-ORDINATED BY | | | | ALL DIMENSIONS ARE IN 'mm' UNLESS OTHERWISE STATED | | | | Institute for Plasma Research | |
| MACHINING DEVIATIONS FOR NON-TOLERANCED DIMENSIONS | | | | SCALE | | | | Bhat, Near Indira Bridge, Gandhinagar 382428, Gujarat (India) | |
| LENGTH IN mm OF SHORTER SIDE OF ANGLES | | | | DRAWN | | | | TITLE | |
| UPTO 10 | | | | K.R.R. | | | | ROD STEM BASE PLATE ASSEMBLY | |
| 10-50 | | | | CHECKED | | | | REF DRG NO: | |
| 50-120 | | | | PKC | | | | REV 0 | |
| OVER 120-400 | | | | APPROVED | | | | DRG. NO | |
| LENGTH OR DIA | | | | JMK | | | | IPR/17/A3/RFQ/19020001 | |
| UPTO 6 | | | | | | | | SHEET 1 OF 1 | |
| 6-30 | | | | | | | | | |
| 30-120 | | | | | | | | | |
| 120-315 | | | | | | | | | |
| +0.1 | | | | | | | | | |
| +0.2 | | | | | | | | | |
| +0.3 | | | | | | | | | |
| +0.5 | | | | | | | | | |



| | | | | |
|--|---------|----------|---------------|---------------|
| DRG.NO | ▽ 8-25 | ▽▽ 1.6-8 | ▽▽▽ 0.025-1.6 | ▽▽▽▽ < 0.025 |
| CO-ORDINATED BY | | | | |
| MACHINING DEVIATIONS FOR NON-TOLERANCED DIMENSIONS | | | | |
| LENGTH IN mm OF SHORTER SIDE OF ANGLES | | | | LENGTH OR DIA |
| UPTO 10 | 10-50 | 50-120 | OVER 120-400 | |
| +1° | +0°-30' | +0°-20' | +0°-10' | |

| REVISION COLUMN | | | | | |
|-----------------|------|-------------|------|---------|----------|
| REV | ZONE | DESCRIPTION | DATE | REMARKS | APPROVED |
| | | | | | |

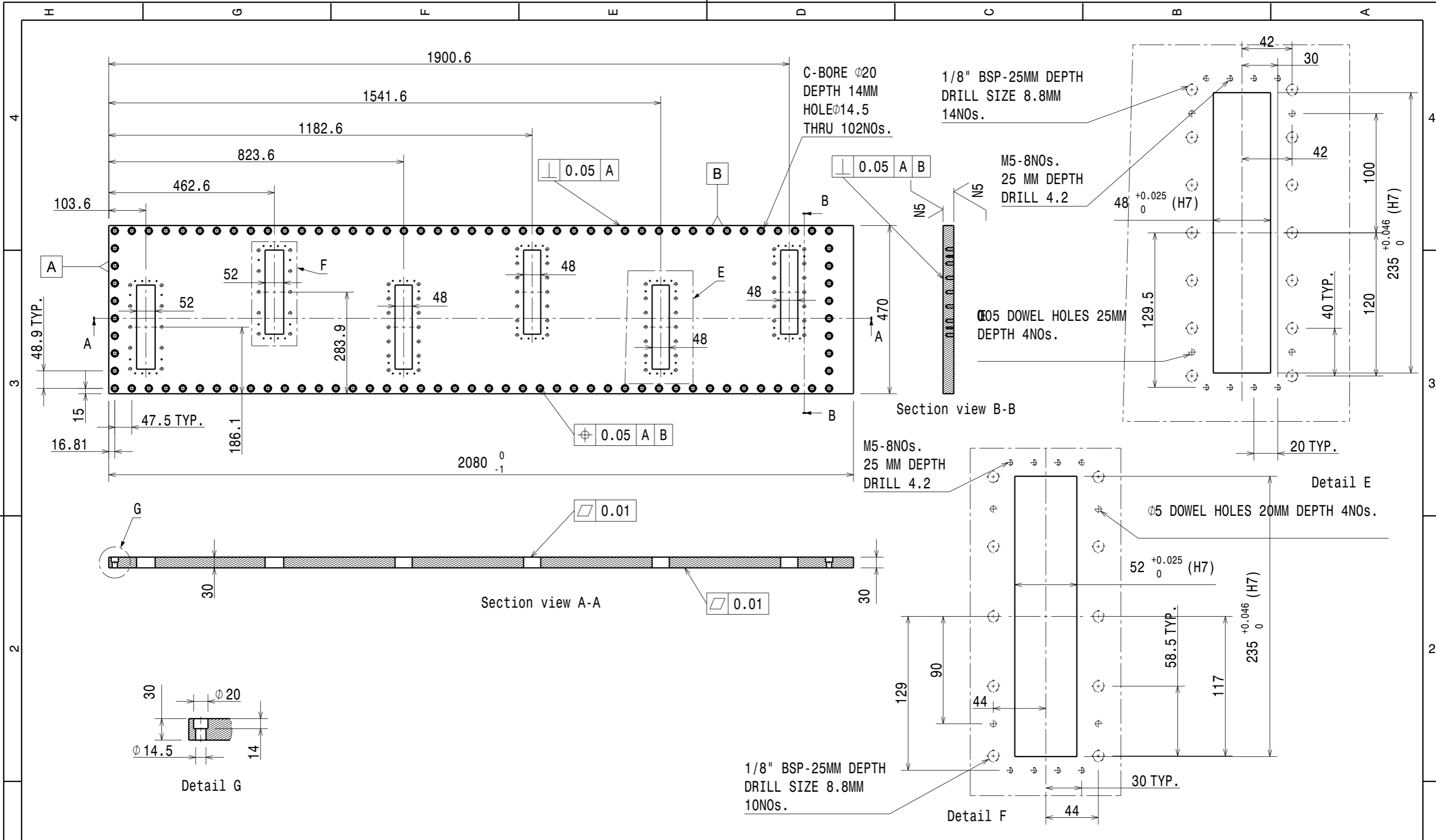
| | | |
|------------|--------|----------|
| RFQ GROUP: | | |
| SCALE | 1:1 | DATE |
| DRAWN | K.R.R. | 26.12.17 |
| CHECKED | PKC | |
| APPROVED | JMK | |

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

TITLE: **BASE PLATE - 2**

REF DRG NO: REV 0

DRG.NO: IPR/17/A3/RFQ/19020003 SHEET 1 OF 1



| | | | | |
|--------|--------|----------|---------------|--------------|
| DRG.NO | ▽ 8-25 | ▽▽ 1.6-8 | ▽▽▽ 0.025-1.6 | ▽▽▽▽ < 0.025 |
|--------|--------|----------|---------------|--------------|

| | | | | |
|--|---------|---------|--------------|---------------|
| MACHINING DEVIATIONS FOR NON-TOLERANCED DIMENSIONS | | | | |
| LENGTH IN mm OF SHORTER SIDE OF ANGLES | | | | LENGTH OR DIA |
| UPTO 10 | 10-50 | 50-120 | OVER 120-400 | |
| +1° | +0°-30' | +0°-20' | +0°-10' | |

| REVISION COLUMN | | | | | |
|-----------------|------|-------------|------|---------|----------|
| REV | ZONE | DESCRIPTION | DATE | REMARKS | APPROVED |
| | | | | | |

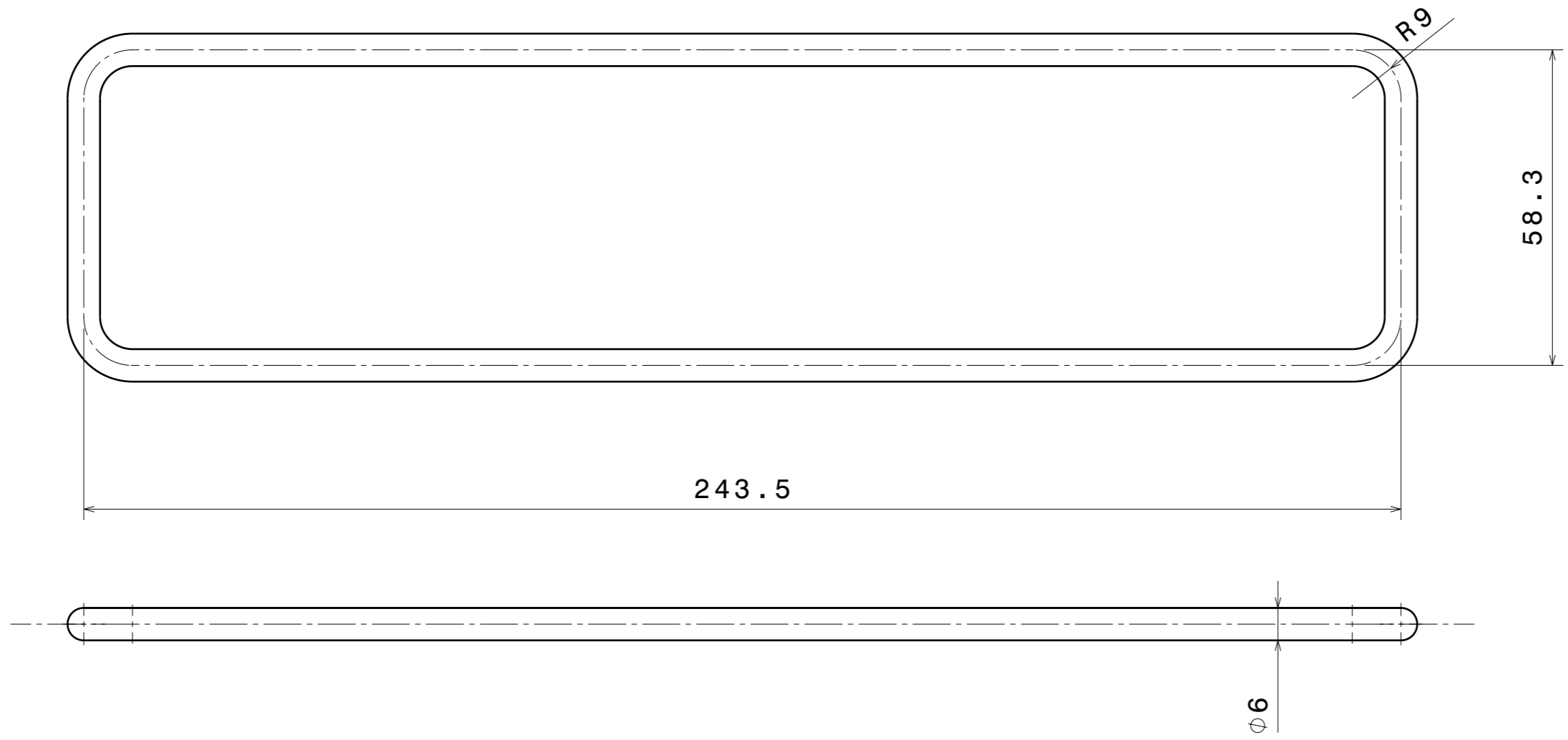
| | | |
|------------|--------|----------|
| RFQ GROUP: | | |
| SCALE | 1:1 | DATE |
| DRAWN | K.R.R. | 26.12.17 |
| CHECKED | PKC | |
| APPROVED | JMK | |

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


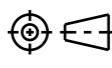
BASE PLATE - 1

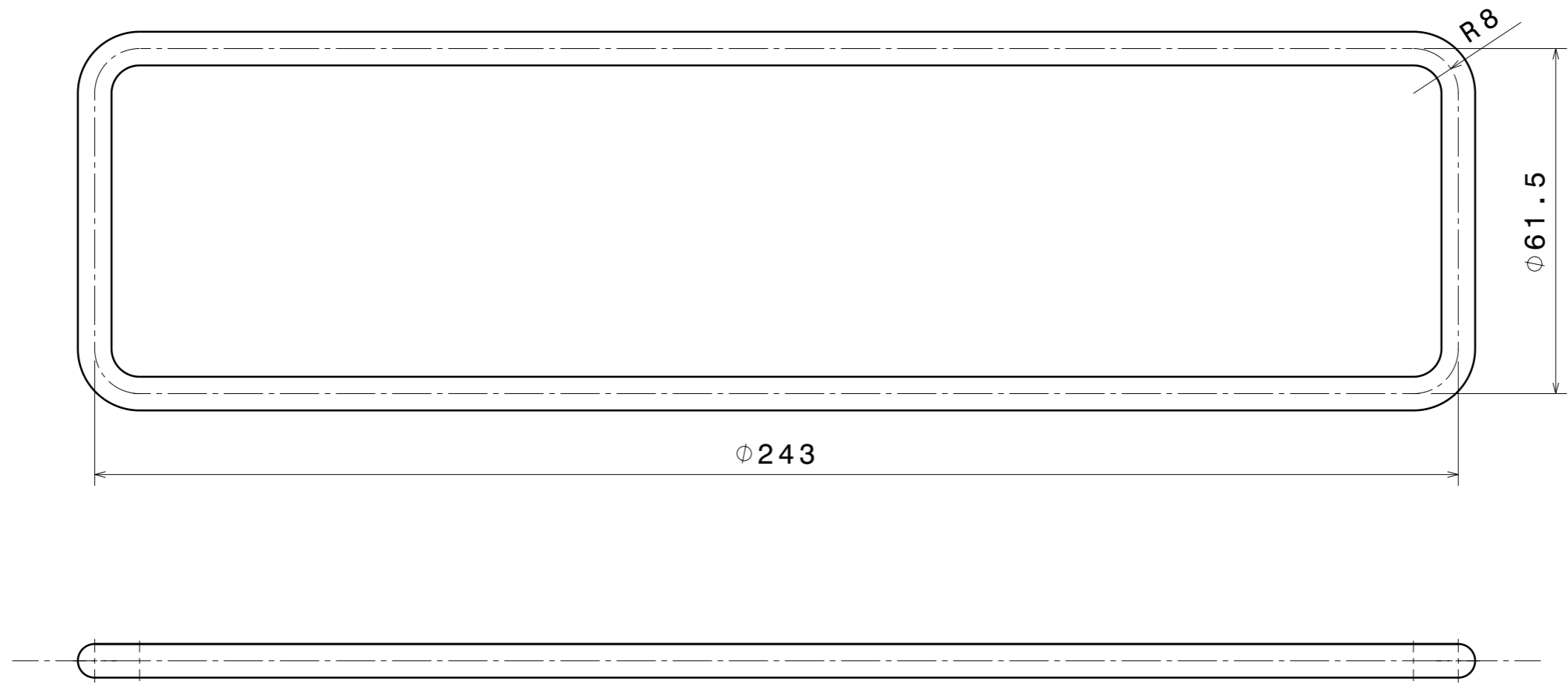
REF DRG NO: REV 0

DRG.NO: IPR/17/A3/RFQ/19020004 SHEET 1 OF 1




NOTE: "O" RING SHOULD MATCH WITH GROOVE.
DRAWING IS FOR REFERENCE ONLY

| | | | | | | | | | | | | | | | |
|--|---------|------------------------|--------------|---------------|--------------|-----------------|--------|-------------|------|------------|----------|--|--|----------|--|
| 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. | 01.01.18 |  O-RING 5 FOR STEM-1 |
| UPTO 10 | 10-50 | 50-120 | OVER 120-400 | | | | | | | | | CHECKED | PKC | | |
| +1° | +0°-30' | +0°-20' | +0°-10' | | +0.1 | +0.2 | +0.3 | +0.5 | | | | APPROVED | JMK | | REV 0 |
| DRG.NO | | IPR/17/A3/RFQ/19020005 | | | | SHEET 1 OF 1 | | | | | | | | | |

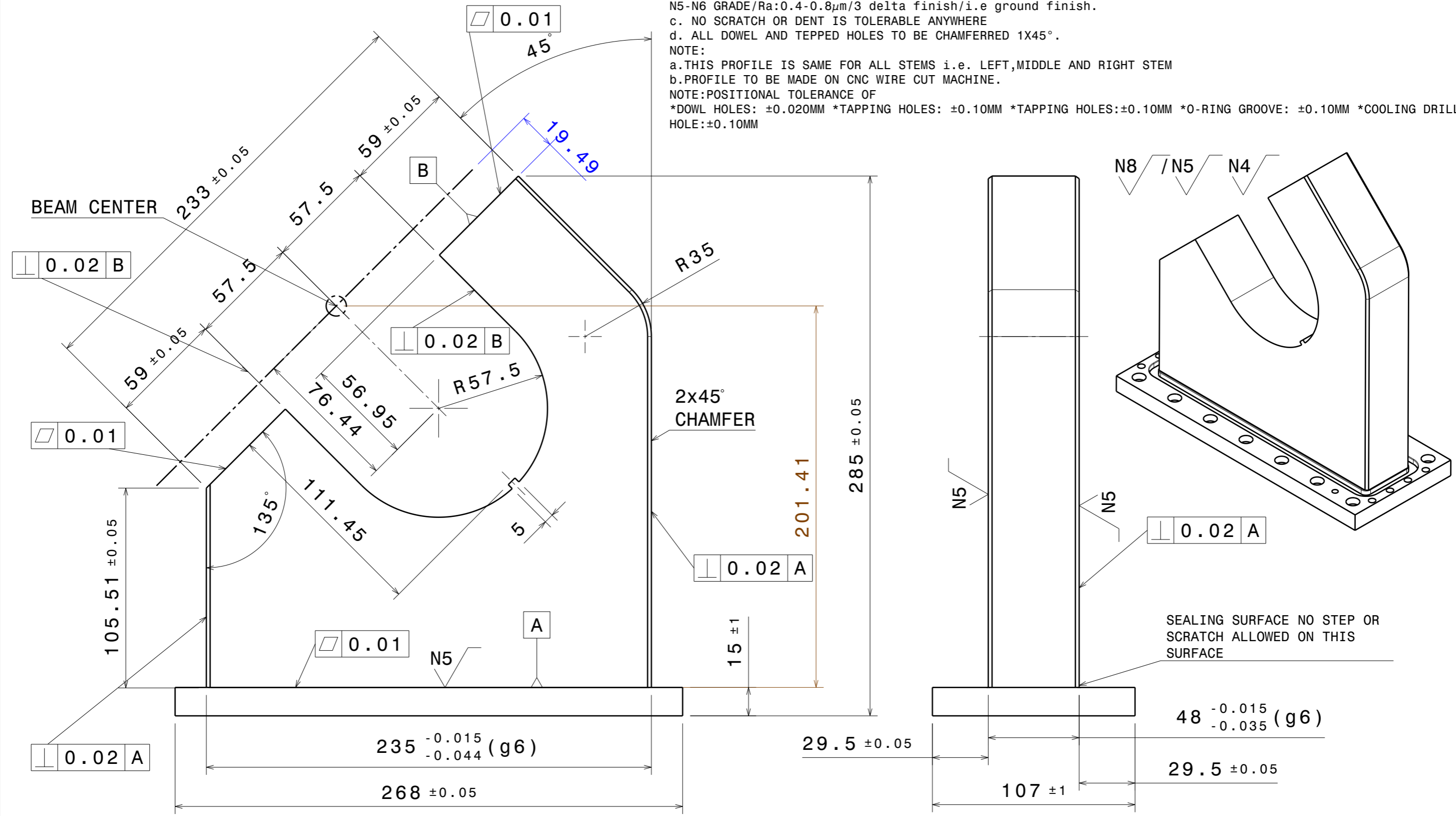


NOTE: "O" RING SHOULD MATCH WITH GROOVE.
DRAWING IS FOR REFERENCE ONLY

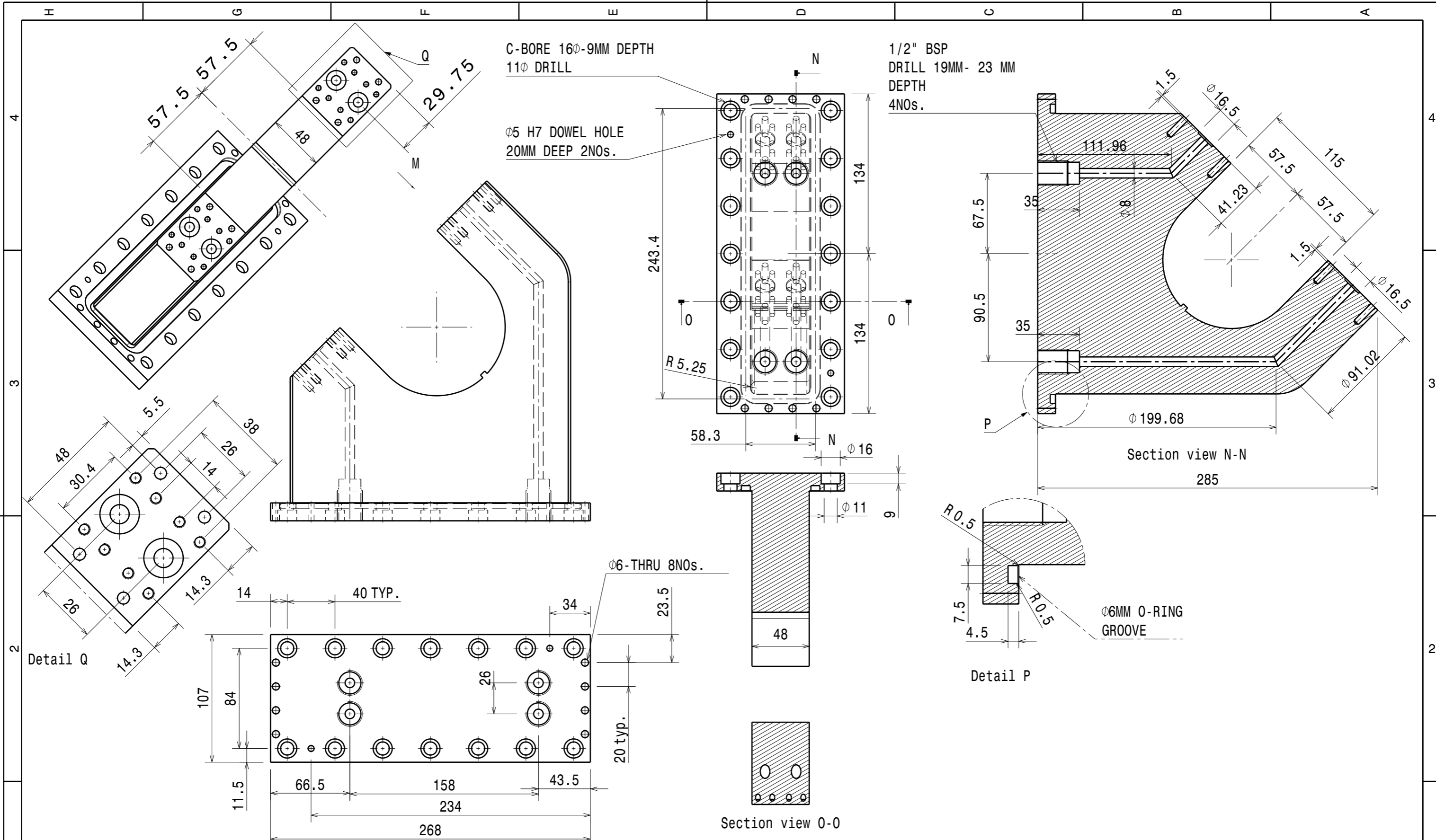
| | | | | | | | | | | | | | | | | | |
|--|---------|---------|--------------|---------------|--------------|-----------------|--------|-------------|------|------------|----------|--|--------|--|--------------------------------|------------------------|--------------|
| DRG.NO | | ▽ 8-25 | ▽▽ 1.6-8 | ▽▽▽ 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. | 01.01.18 | O-RING 6 FOR STEM-2 AND STEM-3 | | |
| 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/19020006 | SHEET 1 OF 1 |
| H | | G | | F | | E | | D | | C | | B | | A | | | |

ALL DIMENSIONS ARE IN MM

NOTES:
 a. THE OUTER PROFILE TO BE WIRECUT ONLY AND IS SAME FOR ALL THE STEMS. PLEASE SEE PROFILE DRAWING NO:-----
 b. OVER ALL SURFACE FINISH:
 N5-N6 GRADE/Ra:0.4-0.8µm/3 delta finish/i.e ground finish.
 c. NO SCRATCH OR DENT IS TOLERABLE ANYWHERE
 d. ALL DOWEL AND TEPPED HOLES TO BE CHAMFERED 1X45°.
 NOTE:
 a. THIS PROFILE IS SAME FOR ALL STEMS i.e. LEFT, MIDDLE AND RIGHT STEM
 b. PROFILE TO BE MADE ON CNC WIRE CUT MACHINE.
 NOTE: POSITIONAL TOLERANCE OF
 *DOWL HOLES: ±0.020MM *TAPPING HOLES: ±0.10MM *TAPPING HOLES: ±0.10MM *O-RING GROOVE: ±0.10MM *COOLING DRILL HOLE: ±0.10MM



| | | | | | | | | | | | | | | | |
|--|---------|----------|---------------|---------------|-----------------|------|-------------|---------|------------|----------|--|---|------------------------|----------|---------------------------|
| 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. | 26.12.17 | STEM -1 MACHINING DETAILS |
| UPTO 10 | 10-50 | 50-120 | OVER 120-400 | | UPTO 6 | 6-30 | 30-120 | 120-315 | | | | CHECKED | PKC | | REF DRG NO: |
| +1° | +0°-30' | +0°-20' | +0°-10' | | +0.1 | +0.2 | +0.3 | +0.5 | | | APPROVED | JMK | | DRG.NO | SHEET 1 OF 3 |
| | | | | | | | | | | | | | IPR/17/A3/RFQ/19020007 | | |



| | | | | |
|--------|--------|----------|---------------|--------------|
| DRG.NO | ▽ 8-25 | ▽▽ 1.6-8 | ▽▽▽ 0.025-1.6 | ▽▽▽▽ < 0.025 |
|--------|--------|----------|---------------|--------------|

| | |
|-----------------|--|
| CO-ORDINATED BY | |
|-----------------|--|

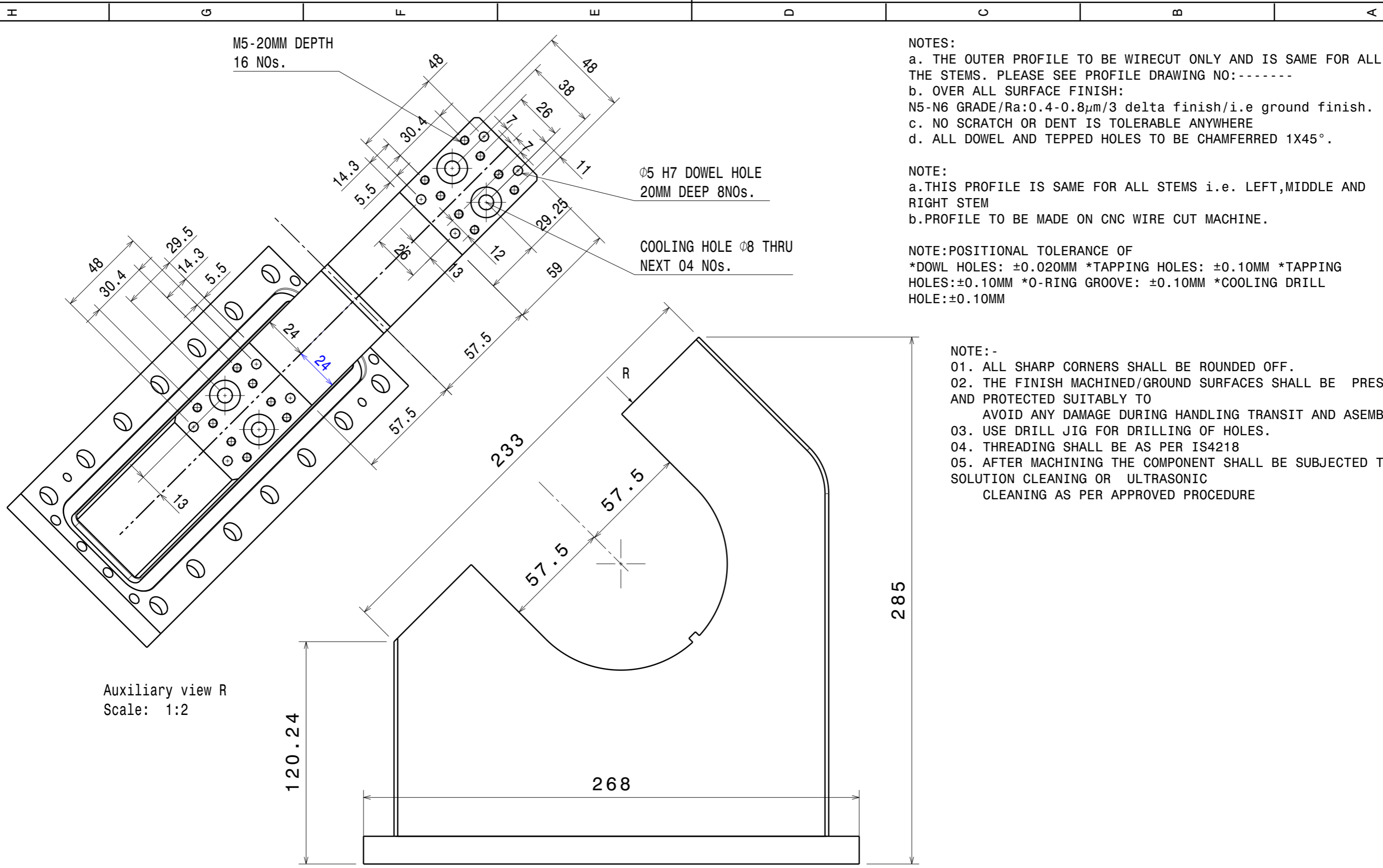
| | | | | | | | | |
|--|---------|---------|--------------|---------------|--------|------|--------|---------|
| MACHINING DEVIATIONS FOR NON-TOLERANCED DIMENSIONS | | | | | | | | |
| LENGTH IN mm OF SHORTER SIDE OF ANGLES | | | | LENGTH OR DIA | UPTO 6 | 6-30 | 30-120 | 120-315 |
| UPTO 10 | 10-50 | 50-120 | OVER 120-400 | | +0.1 | +0.2 | +0.3 | +0.5 |
| +1° | +0°-30' | +0°-20' | +0°-10' | | | | | |

| REVISION COLUMN | | | | | |
|-----------------|------|-------------|------|---------|----------|
| REV | ZONE | DESCRIPTION | DATE | REMARKS | APPROVED |
| | | | | | |
| | | | | | |
| | | | | | |

| | | |
|------------|--------|----------|
| RFQ GROUP: | | |
| SCALE | 1:1 | DATE |
| DRAWN | K.R.R. | 26.12.17 |
| CHECKED | PKC | |
| APPROVED | JMK | |

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

| | | |
|---------------------------|------------------------|--------------|
| TITLE | | |
| STEM -1 MACHINING DETAILS | | |
| REF DRG NO: | IPR/17/A3/RFQ/19020007 | REV 0 |
| DRG.NO | IPR/17/A3/RFQ/19020007 | SHEET 2 OF 3 |




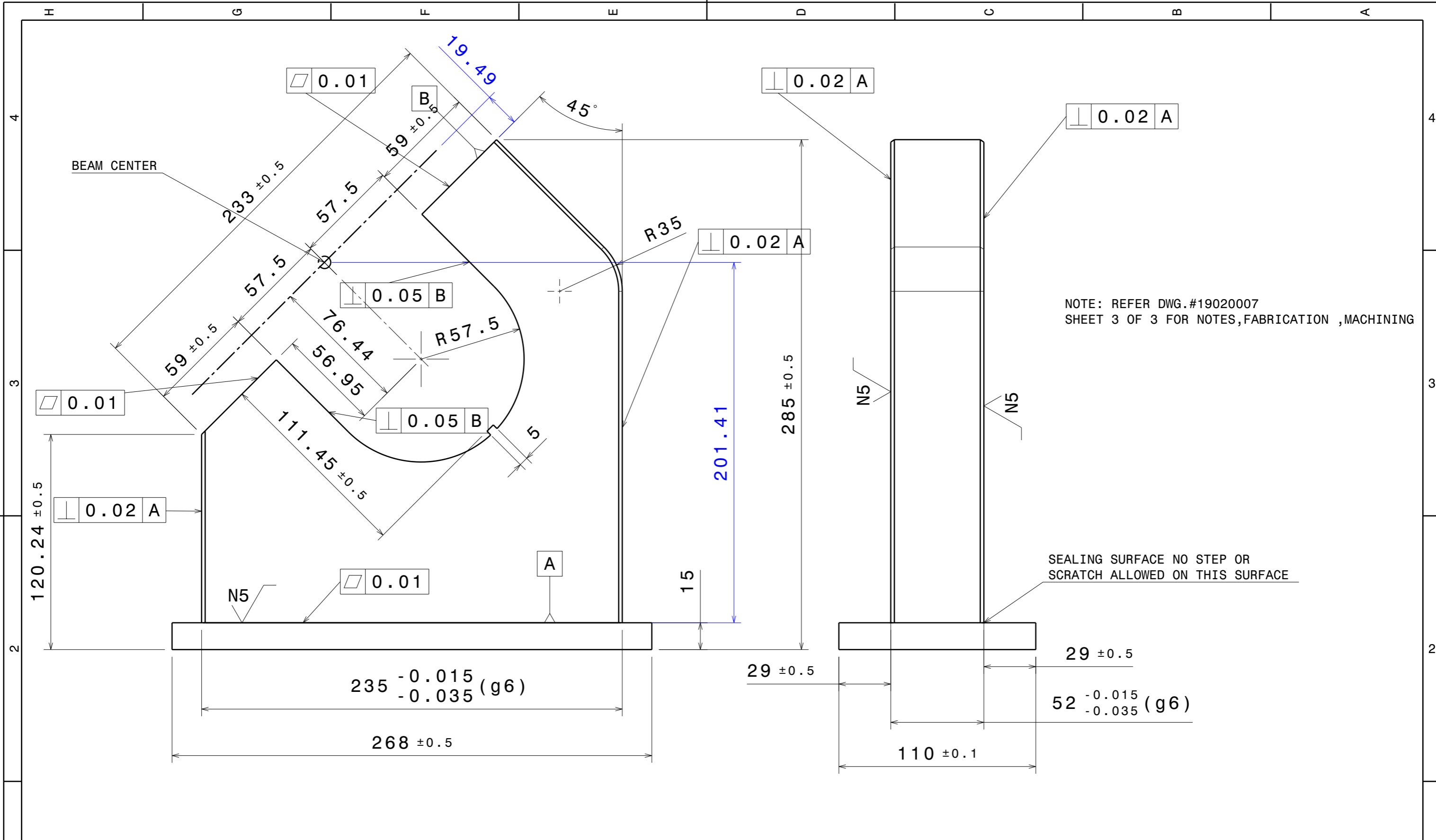
NOTES:
 a. THE OUTER PROFILE TO BE WIRECUT ONLY AND IS SAME FOR ALL THE STEMS. PLEASE SEE PROFILE DRAWING NO:-----
 b. OVER ALL SURFACE FINISH:
 N5-N6 GRADE/Ra:0.4-0.8µm/3 delta finish/i.e ground finish.
 c. NO SCRATCH OR DENT IS TOLERABLE ANYWHERE
 d. ALL DOWEL AND TAPPED HOLES TO BE CHAMFERRED 1X45°.

NOTE:
 a. THIS PROFILE IS SAME FOR ALL STEMS i.e. LEFT, MIDDLE AND RIGHT STEM
 b. PROFILE TO BE MADE ON CNC WIRE CUT MACHINE.

NOTE: POSITIONAL TOLERANCE OF
 *DOWL HOLES: ±0.020MM *TAPPING HOLES: ±0.10MM *TAPPING HOLES: ±0.10MM *O-RING GROOVE: ±0.10MM *COOLING DRILL HOLE: ±0.10MM


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

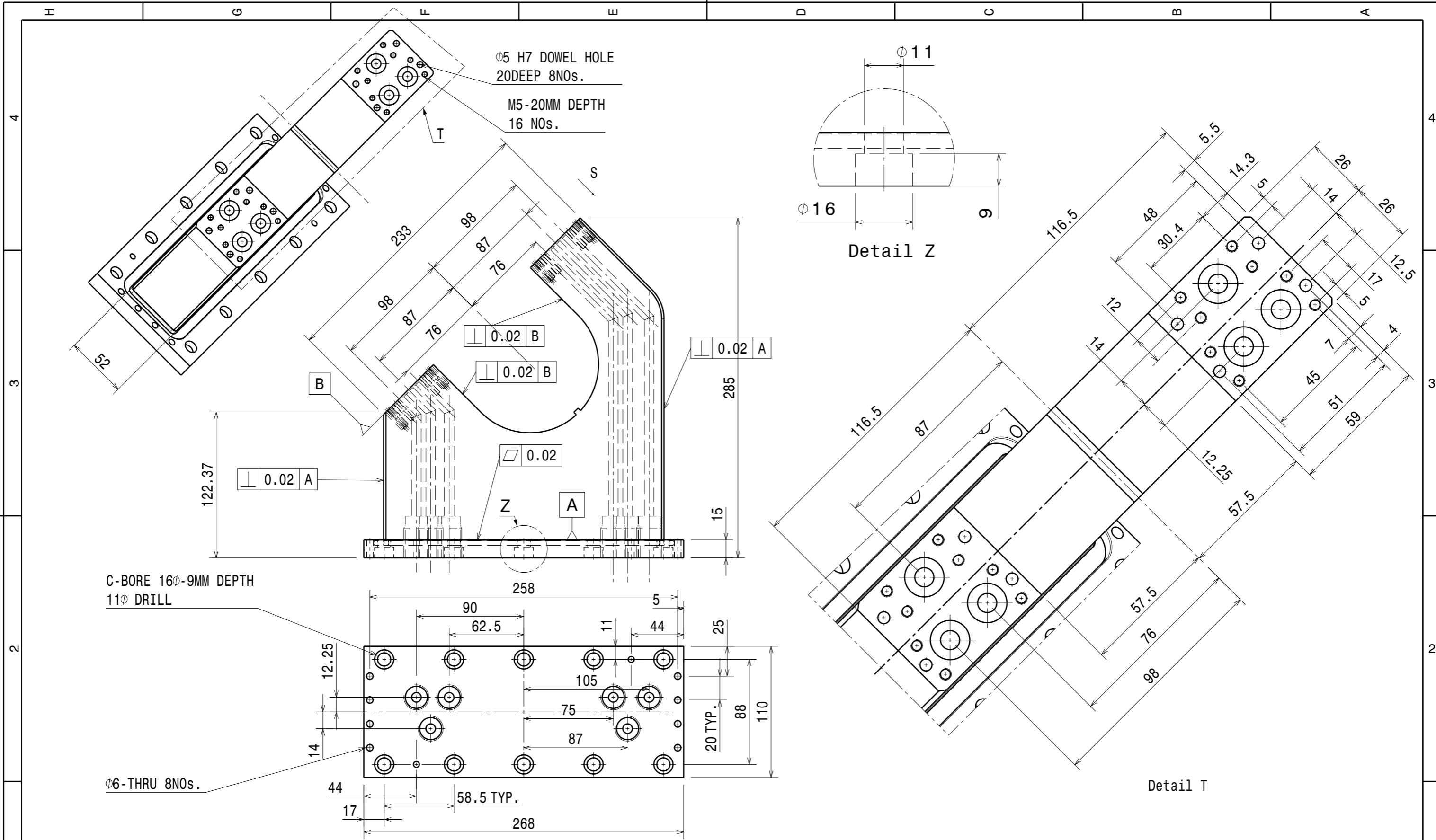
| | | | | | | | | | | | | | | | | |
|--|---------|----------|---------------|---------------|-----------------|-------|-------------|--------------|---------|------------|--|--|--------|----------|---------------------------|--------------|
| DRG.NO | ▽ 8-25 | ▽▽ 1.6-8 | ▽▽▽ 0.025-1.6 | ▽▽▽▽ < 0.025 | 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. | 26.12.17 | STEM -1 MACHINING DETAILS | |
| UPTO 10 | 10-50 | 50-120 | OVER 120-400 | | UPTO 10 | 10-50 | 50-120 | OVER 120-400 | | | | CHECKED | PKC | | REF DRG NO: 19020007 | 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/19020007 | SHEET 3 OF 3 |




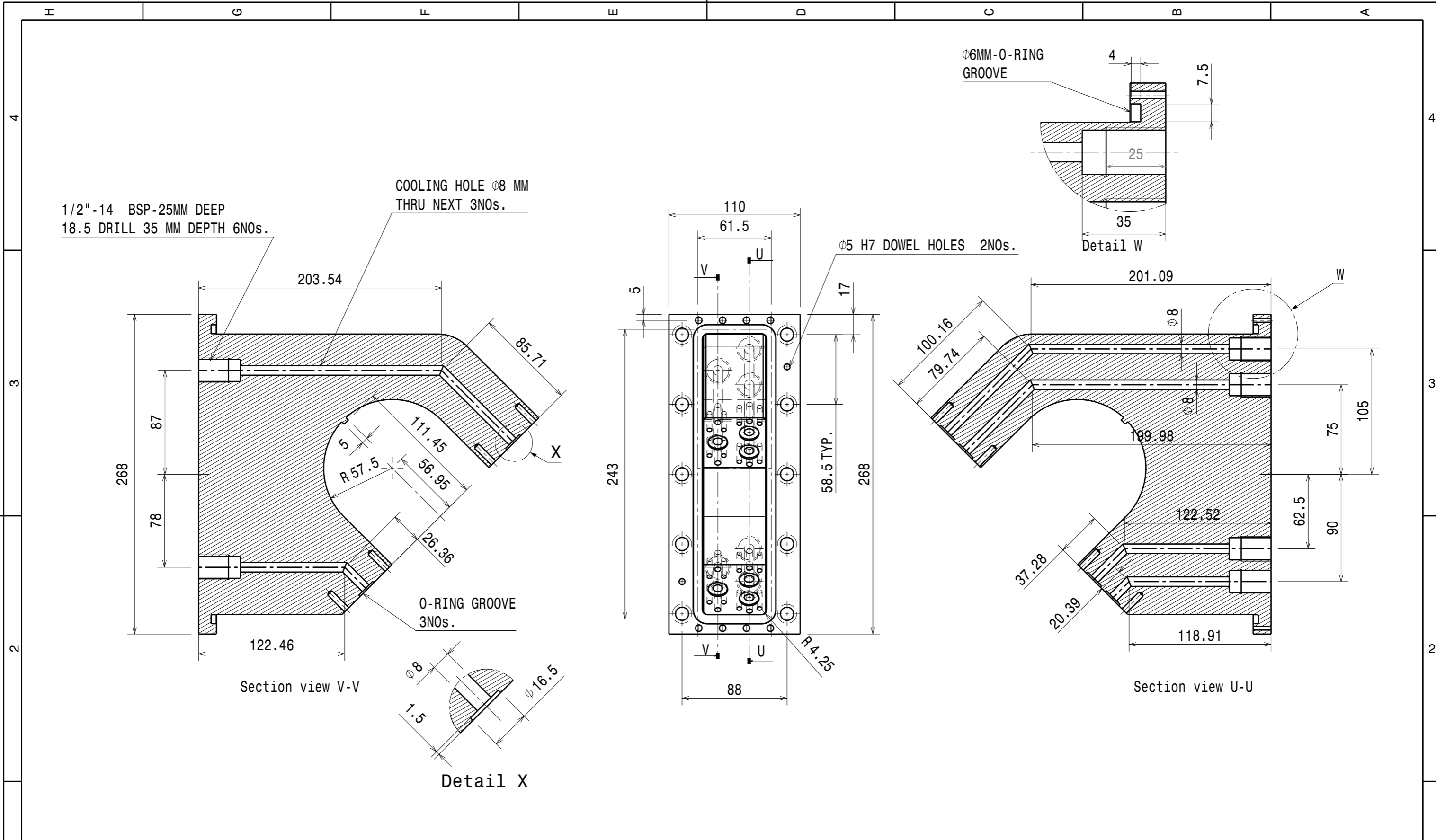
NOTE: REFER DWG.#19020007
SHEET 3 OF 3 FOR NOTES, FABRICATION, MACHINING

SEALING SURFACE NO STEP OR
SCRATCH ALLOWED ON THIS SURFACE

| | | | | | | | | | | | | | | | | |
|--|---------|----------|---------------|---------------|-----------------|------|-------------|---------|---------|------------|--|--------|--|--------------------------|------------------------|-------|
| 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. | 26.12.17 | STEM-2 MACHINING DETAILS | | |
| UPTO 10 | 10-50 | 50-120 | OVER 120-400 | | | | | | | | CHECKED | PKC | | | | |
| +1° | +0°-30' | +0°-20' | +0°-10' | | +0.1 | +0.2 | +0.3 | +0.5 | | | APPROVED | JMK | | REF DRG NO: | | |
| | | | | | | | | | | | | | | DRG.NO | IPR/17/A3/RFQ/19020008 | REV 0 |
| | | | | | | | | | | | | | | | SHEET 1 OF 3 | |



| | | | | | | | | | | | | | | | |
|--|---------|----------|---------------|---------------|-----------------|------|-------------|---------|---------|------------|--|---------|--|----------|---------------------------|
| 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. | 26.12.17 | STEM -2 MACHINING DETAILS |
| 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 | SHEET 2 OF 3 |
| | | | | | | | | | | | IPR/17/A3/RFQ/19020008 | | | | |



| | | | | |
|--------|--------|----------|---------------|--------------|
| DRG.NO | ▽ 8-25 | ▽▽ 1.6-8 | ▽▽▽ 0.025-1.6 | ▽▽▽▽ < 0.025 |
|--------|--------|----------|---------------|--------------|

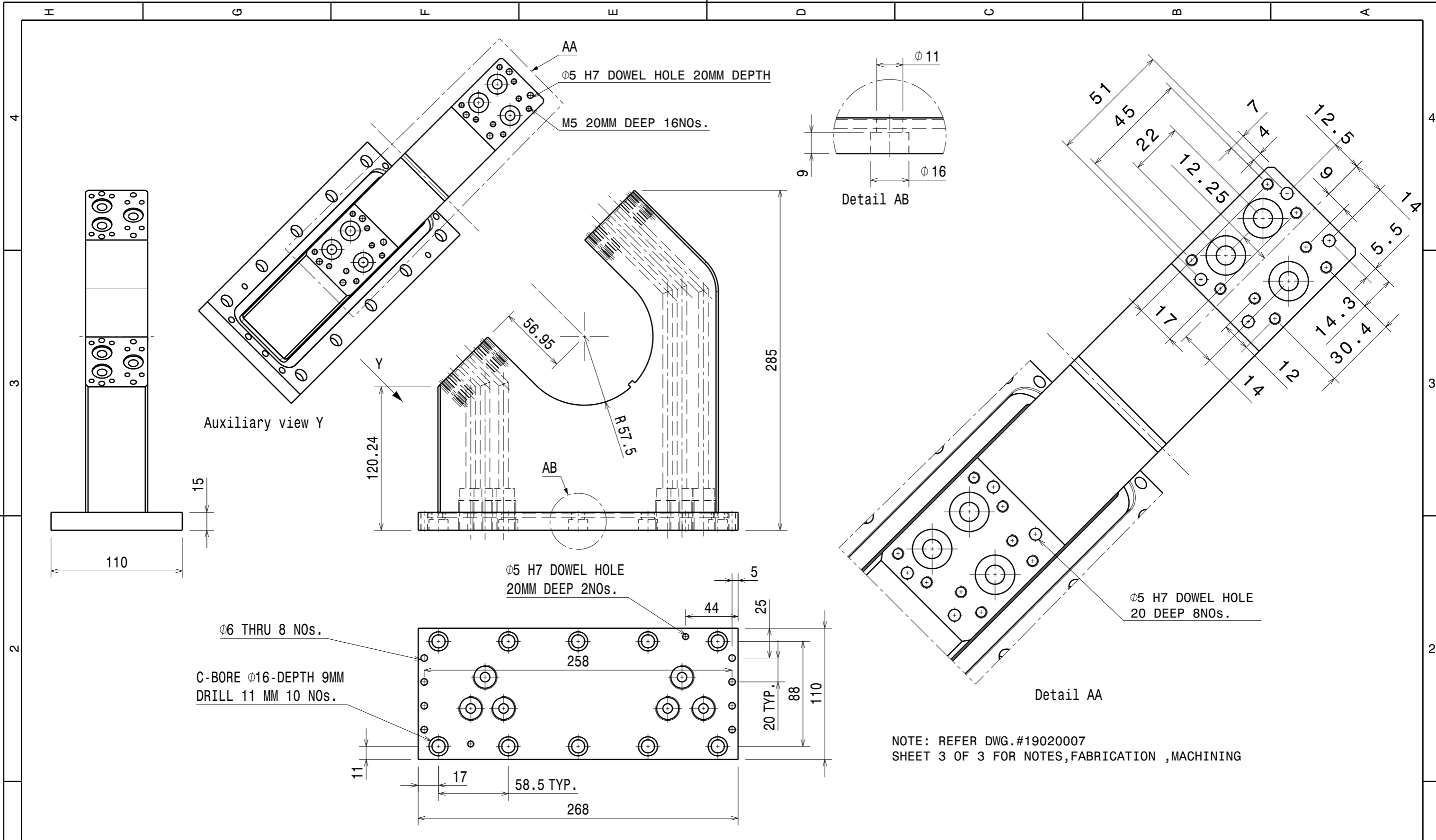
| | | | | | | | | |
|--|---------|---------|--------------|---------------|--------|------|--------|---------|
| MACHINING DEVIATIONS FOR NON-TOLERANCED DIMENSIONS | | | | | | | | |
| LENGTH IN mm OF SHORTER SIDE OF ANGLES | | | | LENGTH OR DIA | UPTO 6 | 6-30 | 30-120 | 120-315 |
| UPTO 10 | 10-50 | 50-120 | OVER 120-400 | | +0.1 | +0.2 | +0.3 | +0.5 |
| +1° | +0°-30' | +0°-20' | +0°-10' | | | | | |

| REVISION COLUMN | | | | | |
|-----------------|------|-------------|------|---------|----------|
| REV | ZONE | DESCRIPTION | DATE | REMARKS | APPROVED |
| | | | | | |
| | | | | | |
| | | | | | |


| | | |
|------------|--------|----------|
| RFQ GROUP: | | |
| SCALE | 1:1 | DATE |
| DRAWN | K.R.R. | 26.12.17 |
| CHECKED | PKC | |
| APPROVED | JMK | |

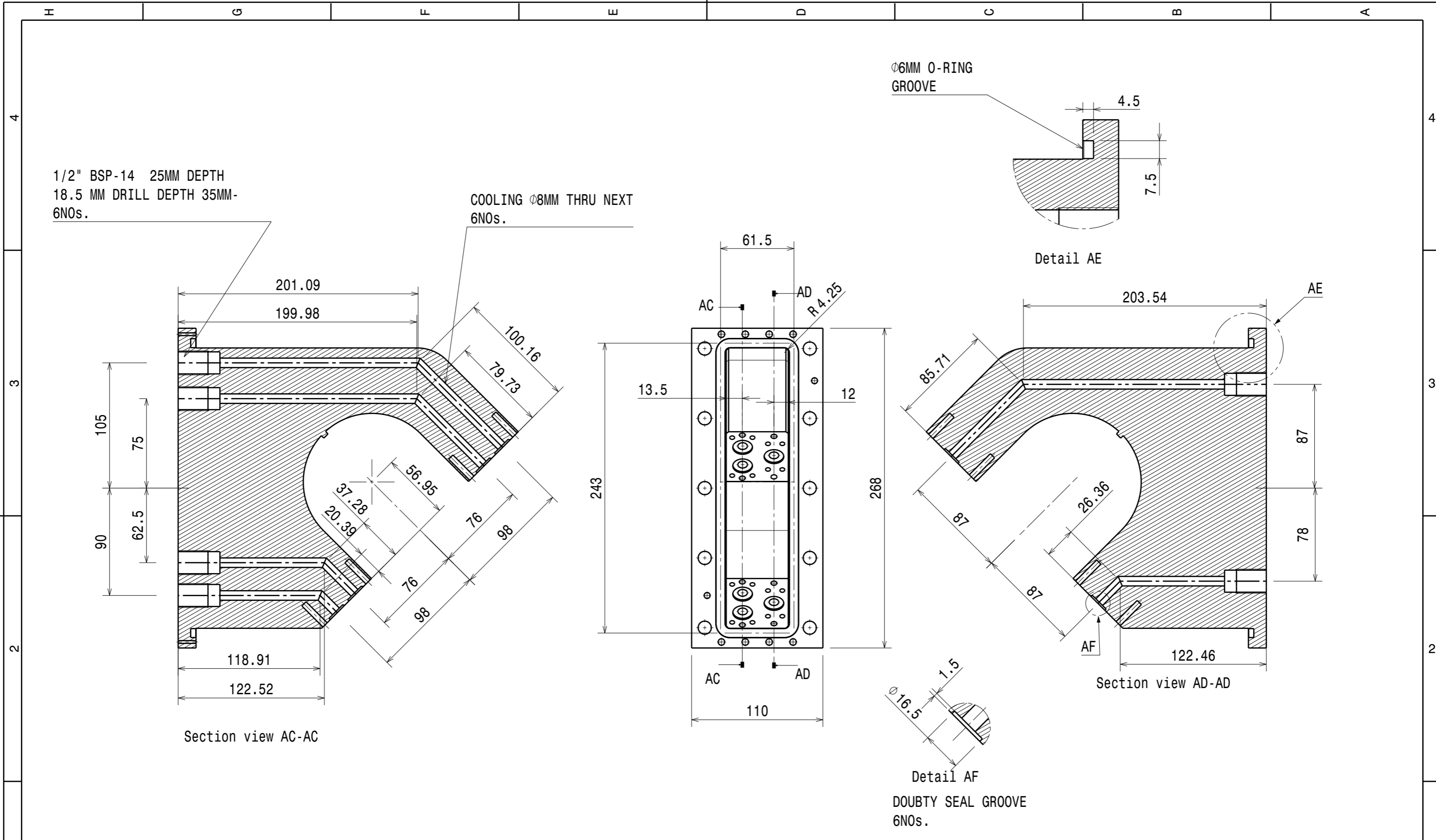
Institute for Plasma Research
 प्लाज्मा अनुसंधान संस्थान
 Bhat, Near Indira Bridge, Gandhinagar 382428, Gujarat (India)

| | | |
|--------------------------|------------------------|--------------|
| TITLE | | |
| STEM-2 MACHINING DETAILS | | |
| REF DRG NO: | IPR/17/A3/RFQ/19020008 | REV 0 |
| DRG.NO | IPR/17/A3/RFQ/19020008 | SHEET 3 OF 3 |



NOTE: REFER DWG.#19020007
SHEET 3 OF 3 FOR NOTES,FABRICATION ,MACHINING


| | | | | | | | | | | | | | | | |
|--|---------|----------|---------------|---------------|-----------------|------|-------------|---------|---------|------------|--|---------|--|-------------------------------|----------------------|
| 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 | STEM-3 MACHINING DETAILS | |
| LENGTH IN mm OF SHORTER SIDE OF ANGLES | | | | LENGTH OR DIA | UPTO 6 | 6-30 | 30-120 | 120-315 | | | | DRAWN | K.R.R. | 26.12.17 | |
| UPTO 10 | 10-50 | 50-120 | OVER 120-400 | | +0.1 | +0.2 | +0.3 | +0.5 | | | | CHECKED | PKC | | REF DRG NO: 19020008 |
| +1° | +0°-30' | +0°-20' | +0°-10' | | | | | | | | APPROVED | JMK | | DRG.NO IPR/17/A3/RFQ/19020009 | SHEET 1 OF 2 |



| | | | | |
|--|---------|----------|---------------|---------------|
| DRG.NO | ▽ 8-25 | ▽▽ 1.6-8 | ▽▽▽ 0.025-1.6 | ▽▽▽▽ < 0.025 |
| CO-ORDINATED BY | | | | |
| MACHINING DEVIATIONS FOR NON-TOLERANCED DIMENSIONS | | | | |
| LENGTH IN mm OF SHORTER SIDE OF ANGLES | | | | LENGTH OR DIA |
| UPTO 10 | 10-50 | 50-120 | OVER 120-400 | |
| +1° | +0°-30' | +0°-20' | +0°-10' | |

| REV | ZONE | DESCRIPTION | DATE | REMARKS | APPROVED |
|-----|------|-------------|------|---------|----------|
| | | | | | |
| | | | | | |
| | | | | | |

| | | |
|------------|--------|----------|
| RFQ GROUP: | | |
| SCALE | 1:1 | DATE |
| DRAWN | K.R.R. | 26.12.17 |
| CHECKED | PKC | |
| APPROVED | JMK | |

| | |
|--|--------|
|  Institute for Plasma Research प्लाज्मा अनुसंधान संस्थान Bhat, Near Indira Bridge, Gandhinagar 382428, Gujarat (India) | |
| TITLE | |
| STEM-3 MACHINING DETAILS | |
| REF DRG NO: | REV |
| 19020008 | 0 |
| DRG.NO | SHEET |
| IPR/17/A3/RFQ/19020009 | 2 OF 2 |

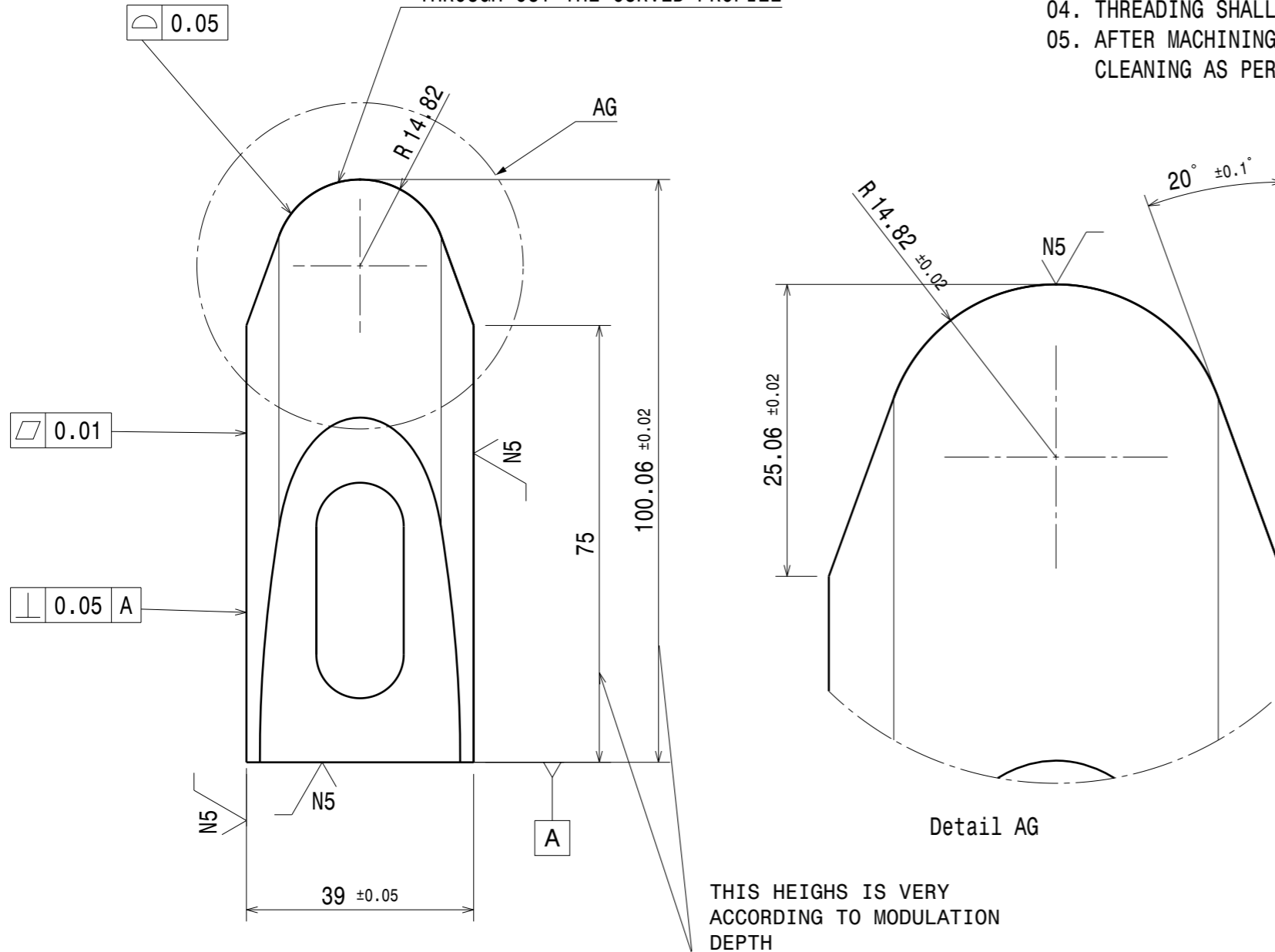
ALL DIMENSIONS ARE IN MM

N5 N6

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

THIS RADIUS IS CONSTANT THROUGH OUT THE CURVED PROFILE

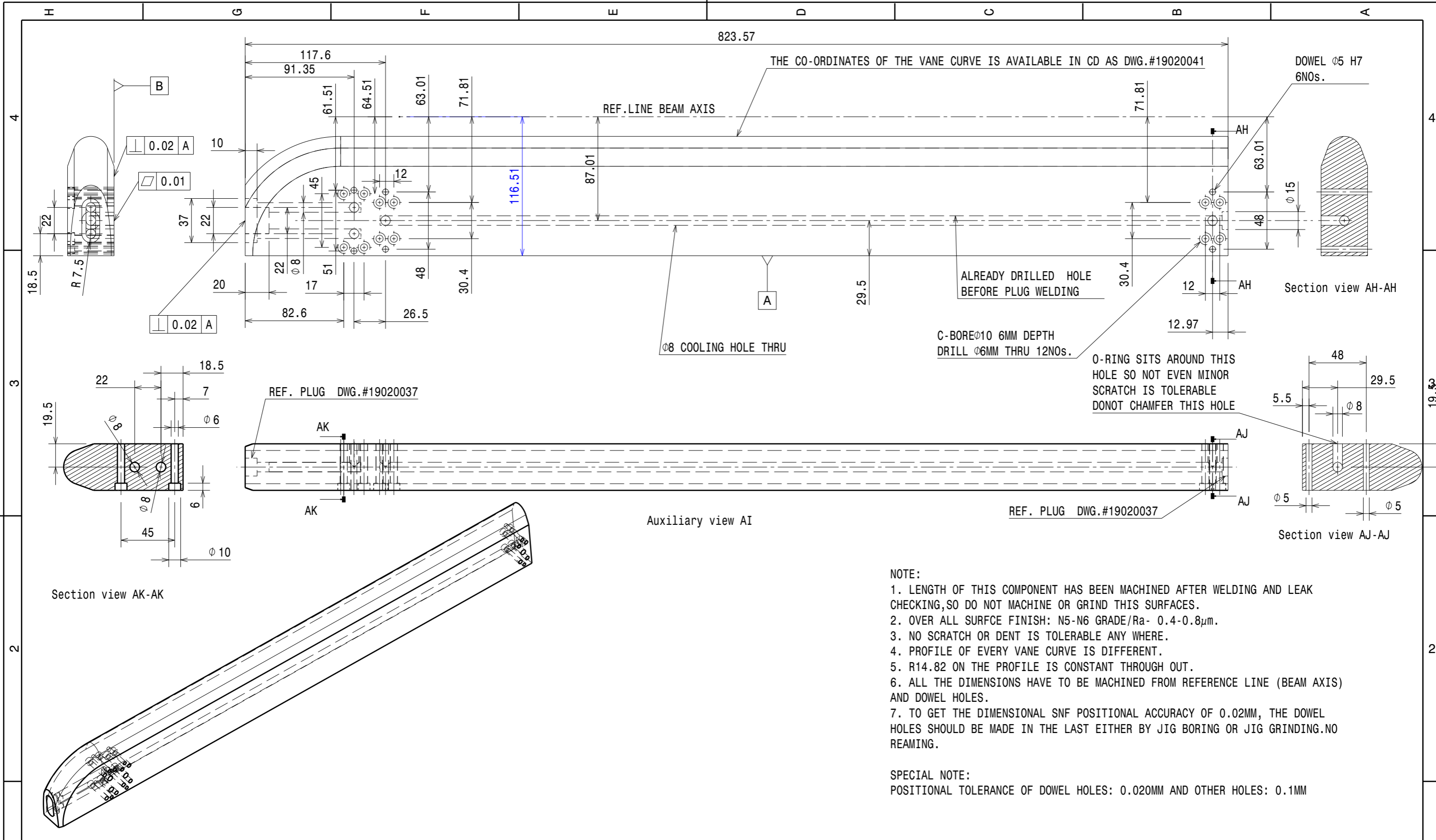



| VANE TYPE | SEGMENT No. | MODULATION START & END POINTS IN MM | LENGTH IN MM |
|-------------|---------------------------------------|-------------------------------------|--------------|
| HORIZONTAL | SEGMENT-1 (LEFT & RIGHT) | -0.00147 TO 823.57161 | 823.57308 |
| | SEGMENT-2 (LEFT & RIGHT) | 823.57161 TO 1541.56737 | 717.99576 |
| | SEGMENT-3 (LEFT & RIGHT) | 1541.56737 TO 2259.53126 | 717.96389 |
| | SEGMENT-4 (LEFT & RIGHT) | 2259.53126 TO 2977.53049 | 717.99923 |
| | SEGMENT-5 (LEFT & RIGHT) | 2977.53049 TO 3695.67418 | 718.14369 |
| | SEGMENT-6 (LEFT & RIGHT) | 3695.67418 TO 4160.19331 | 464.51913 |
| VERTICAL | SEGMENT-1 (UPPER & LOWER) | -0.00147 TO 464.65976 | 464.66123 |
| | SEGMENT-2 (UPPER & LOWER) | 464.65976 TO 1182.74243 | 718.08267 |
| | SEGMENT-3 (UPPER & LOWER) | 1182.74243 TO 1900.71880 | 717.97637 |
| | SEGMENT-4 (UPPER & LOWER) | 1900.71880 TO 2618.76139 | 718.04259 |
| | SEGMENT-5 (UPPER & LOWER) | 2618.76139 TO 3336.75233 | 717.99094 |
| | SEGMENT-6 (UPPER & LOWER) | 3336.75233 TO 4160.19329 | 823.44096 |
| (PROTOTYPE) | SEGMENT-5 (UPPER & LOWER) (PROTOTYPE) | 2977.59 TO 3336.75233 | 359.15866 |

Detail AG

THIS HEIGHTS IS VERY ACCORDING TO MODULATION DEPTH

| DRG.NO | ▽ 8-25 | ▽▽ 1.6-8 | ▽▽▽ 0.025-1.6 | ▽▽▽▽ < 0.025 | REVISION COLUMN | | | | | | RFQ GROUP: | | | Institute for Plasma Research | | | | | | |
|--|---------|----------|---------------|---------------|-----------------|------|-------------|---------|---------|----------|--|-----|------|---|----------|--------|----------|-------------|------------------------|--------------|
| CO-ORDINATED BY | | | | | REV | ZONE | DESCRIPTION | DATE | REMARKS | APPROVED | ALL DIMENSIONS ARE IN 'mm' UNLESS OTHERWISE STATED | | | प्लाज्मा अनुसंधान संस्थान | | | | | | |
| MACHINING DEVIATIONS FOR NON-TOLERANCED DIMENSIONS | | | | | | | | | | | SCALE | 1:1 | DATE | Bhat, Near Indira Bridge, Gandhinagar 382428, Gujarat (India) | | | | | | |
| LENGTH IN mm OF SHORTER SIDE OF ANGLES | | | | LENGTH OR DIA | UPTO 6 | 6-30 | 30-120 | 120-315 | | | | | | | DRAWN | K.R.R. | 01.01.18 | TITLE | VANE CROSS SECTION | |
| UPTO 10 | 10-50 | 50-120 | OVER 120-400 | | UPTO 6 | 6-30 | 30-120 | 120-315 | | | | | | | 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/19020010 | SHEET 1 OF 1 |
| H | | G | | | F | | | E | | | D | | | C | | | B | | A | |



| | | | | | | | | | | | | | | |
|--|---------|----------|---------------|---------------|-----------------|------|-------------|---------|---------|------------|--|--|----------|------------------------|
| 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. | 01.01.18 | H ROD LEFT SEGMENT - 1 |
| 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 | SHEET 1 OF 1 |
| | | | | | | | | | | | IPR/17/A3/RFQ/19020011 | | | |