

# **TENDER DOCUMENT**

**SUPPLY OF FABRICATED COMPONENTS & SPARES FOR  
ONLINE POWDER FINSHING SYSTEM AT IFC**

**AT**

**HLL LIFECARE LIMITED,  
CENTRAL ENGINEERING DIVISION  
PEROORKADA FACTORY,  
THIRUVANANTHAPURAM – 695 005,  
KERALA, INDIA.**

**Phn: 0471 – 2433374, 2437270**

**IFB No. : HLL/CED/IFC/OPFS/FC/2017**

**DATE : 08-02-2017**

	<b>HLL LIFECARE LIMITED</b> <b>(A Government of India Enterprise)</b> <b>CENTRAL ENGINEERING DIVISION</b> <b>PEROOKADA PO, THIRUVANANTHAPURAM-</b> <b>695 005, KERALA, INDIA</b> <b>Phn: 0471 – 2437270, 2433374</b>	
	TENDER FOR THE SUPPLY OF FABRICATED COMPONENTS & SPARES FOR ONLINE POWDER FINISHING SYSTEM AT IRAPURAM FACTORY	
PLANT: IFC	REF: IFB No.HLL/CED/IFC/OPFS/FC/2017	DATE :08-02-2017

**INVITATION FOR BIDS (IFB)**

**IFB No** : **HLL/CED/IFC/OPFS/FC/2017**

**DTAE** : **08-02-2017**

HLL Lifecare Limited (HLL), a Government of India Enterprise is in the process of fabricating Automatic Powder Finishing System for male condoms. For the said project, sealed and super scribed bids are invited from competent and experienced Suppliers/Contractors who are capable to do the following work meeting the requirements as per our tender.

Sl. No	Brief Description of Item/Work	Qty	EMD
1	Supply of Fabricated Components & spares as per drawing and tender specifications at HLL, Irapuram Factory, Kochi	As per Schedule V	Rs.10,000/-

2. The bid documents will be available up to 15.00 Hrs. on the previous working day of the opening of the bids.
3. The Tender Documents can also be downloaded from our Website [www.lifecarehll.com](http://www.lifecarehll.com) from the date of issue of tender document. Tender forms shall be filled in ink or typed. No tender filled in pencil shall be considered. The tenderer shall sign and seal the form at each page and at the end, in token of acceptance of all the terms and conditions of the tender. Any subsequent changes/amendments will be published only in our website.
4. The scheduled date for issue, receipt and opening of bids is as follows.
  - a) Date of issue of tender document - 08-02-2017 onwards
  - b) Last date and time for receipt of bids - 22-02-2017 up to 15.00 Hrs.
  - c) Date and time of opening of bids - 22-02-2017, 15.30 Hrs.
  - d) Address for communication, receipt and place of opening of bids:

Deputy Chief Engineer (CED)  
Central Engineering Division,  
HLL Lifecare Limited (A Government of India Enterprise),  
PB No 2, Peroorkada, Thiruvananthapuram – 695005,  
Kerala State, India  
Ph: (++91 471) 2433374,2437270 –501,502,503  
E-mail: rajeevrv@lifecarehll.com, krknair@lifecarehll.com

	<b>HLL LIFECARE LIMITED</b> <b>(A Government of India Enterprise)</b> <b>CENTRAL ENGINEERING DIVISION</b> <b>PEROOKADA PO, THIRUVANANTHAPURAM-</b> <b>695 005, KERALA, INDIA</b> <b>Phn: 0471 – 2437270, 2433374</b>	
	TENDER FOR THE SUPPLY OF FABRICATED COMPONENTS & SPARES FOR ONLINE POWDER FINISHING SYSTEM AT IRAPURAM FACTORY	
PLANT: IFC	REF: IFB No.HLL/CED/IFC/OPFS/FC/2017	DATE :08-02-2017

5. The completed and sealed bid documents along with the EMD should be submitted to **Deputy Chief Engineer(CED)**, in the above address. The outer cover should bear the Enquiry No, closing date and General description of item tendered, and the words "DO NOT OPEN BEFORE" 15.30 Hrs (IST) on ----- (Indicate the Closing Date).
6. EMD shall be submitted in the form of demand draft drawn from a nationalized bank in favour of HLL Lifecare Limited payable at Thiruvananthapuram. Bids received after due date and time will be rejected. Any bid not accompanied by EMD will be rejected.
7. Bids will be opened in the presence of Bidders representative(s) who choose to attend on the specified date and time, at the office of HLL at the address given in Clause 2 (d) above.
8. The EMD should be enclosed in a separate envelope and super scribed as "EMD" and to be attached in the main cover
9. SSI units interested in availing exemption from payment of EMD should submit a valid copy of their registration certificate issued by the concerned DIC or NSIC.
10. In the event of the date specified for bid receipt and opening being declared as a closed holiday for the above purchaser's office, the due date for submission of bids and opening of bids will be the following working day at the appointed times.
11. HLL may, at its discretion, extend this deadline for submission of bids by amending the Bid Documents or any other reasons, in which case all rights and obligations of HLL and Bidders previously subject to the deadline will thereafter be subject to the deadline as extended.
12. HLL will not be held responsible for the postal delay, if any, in the delivery of the bidding document or the non-receipt of the same. Bids sent by Telex/Fax/Telegraph will not be accepted.
13. The company reserves the right to club or split the items of works, change the qualifying criteria at their discretion and to reject or cancel the Invitation for bids without assigning any reason thereof.
14. In addition to the invitation for bids, the bidding documents include the following schedules.

SCHEDULE	- I	: Conditions of Bid
SCHEDULE	- II	: Detailed Specification of Item
SCHEDULE	- III	: Conditions of Contract
SCHEDULE	- IV	: Acceptance Form
SCHEDULE	- V	: Format of Quoting

**DEPUTY CHIEF ENGINEER (CENTRAL ENGINEERING DIVISION)**

	<b>HLL LIFECARE LIMITED</b> <b>(A Government of India Enterprise)</b> <b>CENTRAL ENGINEERING DIVISION</b> <b>PEROOKADA PO, THIRUVANANTHAPURAM-</b> <b>695 005, KERALA, INDIA</b> <b>Phn: 0471 – 2437270, 2433374</b>	
	TENDER FOR THE SUPPLY OF FABRICATED COMPONENTS & SPARES FOR ONLINE POWDER FINISHING SYSTEM AT IRAPURAM FACTORY	
PLANT: IFC	REF: IFB No.HLL/CED/IFC/OPFS/FC/2017	DATE :08-02-2017

## SCHEDULE I

### CONDITIONS OF BID

#### 1. Definitions

- a. **“Invitation For Bid”** shall mean and include the present document, and such other complements and agenda, which may subsequently be issued in this connection.
- b. **“Purchaser/Owner”** shall mean HLL Lifecare Limited, (Thiruvananthapuram) or its units thereof.
- c. **“Bidder”** shall mean the person, firm of Corporation submitting a bid against this invitation for bid and shall also include his agents and representatives.
- d. **“Supplier/Contractor”** shall mean the bidder whose bid has been accepted and shall also include his successors and assigns, agents and representatives.
- e. **“Contract”** means signed acceptance of the Letter of Intend, if issued, and order by the supplier.
- f. **“Site”** shall mean **HLL Lifecare Limited, Irapuram Factory, Kochi, Kerala**

#### 2. Bid Information and Period of Validity

2.1 The Bid must include the following information,

- a. Enquiry / IFB No.
- b. EMD
- c. Promised Delivery Schedule for each item/work.
- d. Certificate that bid is in total conformity with the specifications and terms and conditions mentioned in the bid document and if not, list of exclusions, and/or exceptions.
- e. All information requested in the specifications, dimensional drawings, technical literature describing the make offered, material etc., as specified in the bid document.
- f. The Price should be quoted as per the following:
  - i) The Bidder shall indicate all prices including basic price, the relevant duties and taxes, other levies, packing & forwarding charges, charges for inland transportation and other local costs incidental to delivery of the goods to supplier’s site, etc. on the appropriate price schedule (FORMAT FOR QUOTING – SCHEDULE IV) attached to these documents for completing the above work as per the Specification, Terms and Conditions as specified in the Bid Documents. Civil work is excluded from the scope of the supplier.

	<b>HLL LIFECARE LIMITED</b> <b>(A Government of India Enterprise)</b> <b>CENTRAL ENGINEERING DIVISION</b> <b>PEROOKADA PO, THIRUVANANTHAPURAM-</b> <b>695 005, KERALA, INDIA</b> <b>Phn: 0471 – 2437270, 2433374</b>	
	TENDER FOR THE SUPPLY OF FABRICATED COMPONENTS & SPARES FOR ONLINE POWDER FINISHING SYSTEM AT IRAPURAM FACTORY	
PLANT: IFC	REF: IFB No.HLL/CED/IFC/OPFS/FC/2017	DATE :08-02-2017

- ii) Bidder must quote for unit price and total price based on the requirement shown in the bid document.
- iii) Price should be firm without any escalation on any account until the order is completely fulfilled.
- iv) All other documents/certificate/information as specified in the bid document.

2.2 Bids shall remain valid for **90 days** after the date of bid opening prescribed by the Purchaser.

### 3. Format and Signing of Bid

- 3.1 All pages of the bid, except for un-amended printed literature shall be signed by the person or persons signing the bid.
- 3.2 Bids shall be made in English.
- 3.3 The bid shall contain no interlineations, erasures or overwriting except as necessary to correct errors made by the Bidder, in which case such corrections shall be signed by the person or persons signing the bid.

### 4. Submission of Bids

#### Sealing and Marking of Bids

- 4.1 The bids should be submitted in duplicate. The Bidder shall seal the original and each copy of the bid in an inner and then in an outer envelope, duly marked the envelopes as "original" and "copy".
- 4.2 The inner and outer envelopes shall be:
  - (a) Addressed to the Purchaser in the following address,

**Deputy Chief Engineer (CED),**  
HLL Lifecare Limited  
Central Engineering Division,  
Perookada. PO, Thiruvananthapuram – 695005,  
Kerala, India  
Phn: 0471 – 2437270, 2433374  
E-mail:rajeevrv@lifecarehll.com, krknair@lifecarehll.com
  - (b) Bear the Enquiry No, closing date and General description of item tendered, and the words "DO NOT OPEN BEFORE" 15.30 Hrs (IST) on ----- (Indicate the Closing Date).
- 4.3 The inner envelopes shall indicate the name and address of the Bidder. If the outer envelope is not sealed and marked as indicated above, the Purchaser will assume no responsibility for the bid's misplacement or premature opening.

	<p align="center"><b>HLL LIFECARE LIMITED</b>  <b>(A Government of India Enterprise)</b>  <b>CENTRAL ENGINEERING DIVISION</b>  <b>PEROOKADA PO, THIRUVANANTHAPURAM-</b>  <b>695 005, KERALA, INDIA</b>  <b>Phn: 0471 – 2437270, 2433374</b></p>	
	<p align="center">TENDER FOR THE SUPPLY OF FABRICATED  COMPONENTS &amp; SPARES FOR ONLINE  POWDER FINISHING SYSTEM AT IRAPURAM  FACTORY</p>	
PLANT: IFC	REF: IFB No.HLL/CED/IFC/OPFS/FC/2017	DATE :08-02-2017

4.4 Bids should be hand delivered or sent by courier to ensure timely arrival. Telex, cable, e-mail or facsimile bids will be rejected.

**Deadline for submission of Bids**

4.5 The bids will be received by the Purchaser in the above given address (4.2.a) not later than the date and time specified in the Invitation for Bids.

In the event of the specified date for submission of Bids being declared a holiday for the Purchaser, the bids will be received up to the appointed time on the next working day.

4.6 The purchaser may, at its discretion, extend this deadline for submission of bids by amending the Bid Documents or any other reasons in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

4.7 It is the responsibility of the bidders to see that the completed bidding documents whether sent by post or by courier or by person are received in the office of **Deputy Chief Engineer(CED)**, in the above address by the date and time stipulated for receipt as above failing which the bid would be considered late and rejected. Purchaser will not be held responsible for the postal delay, if any, in the delivery of the bidding document or the non-receipt of the same. Bids received after due date and time will be rejected. Mere handing over of the bid documents at reception counter or at any other counter or room or person cannot be considered as submission of bid.

**5. Clarification of Bidding Documents**


A prospective Bidder requiring any clarification of the Bidding Documents may notify the Purchaser in writing, or by fax at the purchasers mailing address indicated in the Invitation for Bids. The Purchaser will respond in writing to any request for clarification of Bidding Documents, which it receives not later than 7 days prior to the deadline for submission of Bids prescribed by the Purchaser.

**6. Amendment of Bidding Documents**

6.1 At any time prior to the deadline for submission of bids, the Purchaser may, for any reason, modify the Bidding Documents by amendment.

6.2 The amendment will be notified in writing or fax or telegram or e-mail to all prospective Bidders, which have received the Bidding Documents and will be binding on them.

6.3 In order to afford prospective Bidders reasonable time in which to take the amendment in to account in preparing their bid, the Purchaser may, at its discretion, extend the deadline for the submission of bids.

	<b>HLL LIFECARE LIMITED</b> <b>(A Government of India Enterprise)</b> <b>CENTRAL ENGINEERING DIVISION</b> <b>PEROOKADA PO, THIRUVANANTHAPURAM-</b> <b>695 005, KERALA, INDIA</b> <b>Phn: 0471 – 2437270, 2433374</b>	
	TENDER FOR THE SUPPLY OF FABRICATED COMPONENTS & SPARES FOR ONLINE POWDER FINISHING SYSTEM AT IRAPURAM FACTORY	
PLANT: IFC	REF: IFB No.HLL/CED/IFC/OPFS/FC/2017	DATE :08-02-2017

## 7. Bid Opening by Purchaser

- 7.1 The Purchaser will open bids, in the presence of the bidders' representatives who choose to attend, at the date and time specified and in the location given in this document. The Bidders' representatives who are present shall sign a register evidencing their attendance. In the event of the specified date of bid opening being declared a holiday for the Purchaser, the bids shall be opened at the appointed time and location on the next working day.
- 7.2 The Purchaser will prepare appropriate bid opening register and the same shall be signed by bidders present during the opening of the bids and Purchaser.

## 8. Clarification of bids

To assist in the examination, evaluation and comparison of bids, the purchaser may, at its discretion, ask the bidder for a clarification of its bid. The request for clarification and the response shall be in writing and no change in the price or substance of the bid shall be sought, offered or permitted.

## 9. Preliminary examination

- 9.1 The purchaser will examine the bids to determine whether they are complete, whether any computational errors have been made, whether the documents have been properly signed, whether the bid validity is as required and whether the bids are generally in order.
- 9.2 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be calculated. If there is a discrepancy between the words and figures, the amount in words shall prevail.
- 9.3 Prior to the detailed evaluation, the purchaser will determine the substantial responsiveness of each bid to the bidding documents. For purposes of these clauses, a substantially responsive bid is one that conforms to specifications and all the terms and conditions of the bidding documents without material deviation. The purchaser's determination of a bid's responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.
- 9.4 A bid determined as not substantially responsive will be rejected by the purchaser and may not subsequently be made responsive by the bidder by correction of the non-conformity.
- 9.5 The purchaser may waive any minor informality or non-conformity or irregularity in a bid, which does not constitute a material deviation, provided such waiver does not prejudice or affect the relative ranking of any bidder.

	<b>HLL LIFECARE LIMITED</b> <b>(A Government of India Enterprise)</b> <b>CENTRAL ENGINEERING DIVISION</b> <b>PEROOKADA PO, THIRUVANANTHAPURAM-</b> <b>695 005, KERALA, INDIA</b> <b>Phn: 0471 – 2437270, 2433374</b>	
	TENDER FOR THE SUPPLY OF FABRICATED COMPONENTS & SPARES FOR ONLINE POWDER FINISHING SYSTEM AT IRAPURAM FACTORY	
PLANT: IFC	REF: IFB No.HLL/CED/IFC/OPFS/FC/2017	DATE :08-02-2017

9.6 The purchaser's determination as to the substantial responsiveness or otherwise of each bid or consideration of a minor informality or non-conformity or irregularity is final and conclusive.

#### 10. Evaluation and comparison of bids.

10.1 The purchaser will technically evaluate all bids previously determined to be responsive and compare the bids previously determined to be substantially responsive and technically acceptable.

#### 11. Post – qualification

11.1 Notwithstanding the qualification requirements given in this document, the Purchaser will determine to its satisfaction whether the Bidder selected as having submitted the lowest evaluated responsive bid is qualified to satisfactorily perform the Contract.

11.2 The determination will take into account the Bidder's financial, technical and production capabilities. It will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, as well as such other information as the Purchaser deems necessary and appropriate.

11.3 The Purchaser reserves the right to negotiate with the lowest evaluated responsive bidder.

11.4 An affirmative determination will be a prerequisite for award of the Contract to the Bidder. A negative determination will result in rejection of the Bidder's bid, in which event the Purchaser will proceed to the next lowest evaluated bid to make a similar determination of that bidder's capabilities to perform satisfactorily.

11.5 Conditional Bids shall not be entertained.

#### 12. Award Criteria

The Purchaser will award the Contract to the successful Bidder whose bid has been determined to be substantially responsive and has been determined as the lowest evaluated bid provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily for the items offered.

#### 13. Notification of Award

13.1 Prior to the expiration of the period of bid validity, the purchaser will notify the successful Bidder in writing by post or by cable or telex or fax, to be confirmed in writing by post, that its bid has been accepted. The notification of award may be sent in the form of Letter of Intend / Work order.



	<b>HLL LIFECARE LIMITED</b> <b>(A Government of India Enterprise)</b> <b>CENTRAL ENGINEERING DIVISION</b> <b>PEROOKADA PO, THIRUVANANTHAPURAM-</b> <b>695 005, KERALA, INDIA</b> <b>Phn: 0471 – 2437270, 2433374</b>	
	TENDER FOR THE SUPPLY OF FABRICATED COMPONENTS & SPARES FOR ONLINE POWDER FINISHING SYSTEM AT IRAPURAM FACTORY	
PLANT: IFC	REF: IFB No.HLL/CED/IFC/OPFS/FC/2017	DATE :08-02-2017

13.2 The signed acceptance of the notification of award by the Supplier/Contractor will constitute a concluded contract.

#### 14. Earnest Money

14.1 Each bid must be accompanied by E.M.D.

14.2 The EMD is required to protect the Purchaser against risk of Bidder's conduct, which would warrant the security's forfeiture

- a. The EMD shall be denominated in Indian Rupees and shall be in the form of cash deposit or demand draft from a nationalized bank drawn in favour of HLL Lifecare Limited payable at Thiruvananthapuram.
- b. E.M.D of the unsuccessful bidders will be released after tabulating tenders, keeping only the earnest money of the first three lowest bidders.
- c. E.M.D of the remaining two unsuccessful bidders will be released after the acceptance of the notification of award by the successful bidder.
- d. In the case of successful bidder, the Earnest Money will be returned after the satisfactory completion of the work and acceptance of item/work by HLL.

14.3 The EMD may be forfeited:

- (a) If a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Bid Document; or
- (b) If the Bidder fails to sign the Contract / Work order, in the case of successful Bidder.

	<b>HLL LIFECARE LIMITED</b> <b>(A Government of India Enterprise)</b> <b>CENTRAL ENGINEERING DIVISION</b> <b>PEROOKADA PO, THIRUVANANTHAPURAM-</b> <b>695 005, KERALA, INDIA</b> <b>Phn: 0471 – 2437270, 2433374</b>	
	TENDER FOR THE SUPPLY OF FABRICATED COMPONENTS & SPARES FOR ONLINE POWDER FINISHING SYSTEM AT IRAPURAM FACTORY	
PLANT: IFC	REF: IFB No.HLL/CED/IFC/OPFS/FC/2017	DATE :08-02-2017

## SCHEDULE II

### DETAILED SPECIFICATION OF ITEM

#### **Requirement:**

We are in the process of fabricating Online Powder Finishing Equipments at our Irapuram Factory, Kochi for male condoms. For the proposed machine, we require the following item as per the specifications given below:

#### **Technical Data and Specification**

Item : As per schedule V  
Quantity : As per schedule V  
Drawing No : As per schedule V

#### **GENERAL CONDITIONS**

- 1) Given specification are indicative only. The supplier should visit the HLL Site at Peroorkada Factory, Thiruvananthapuram and see the machines and also take their own assessments before quoting of bids. Prior permission from HLL shall be taken for visiting the plant. No photographs will be allowed inside the plant. The purchaser will not be responsible for any wrong quotes due to inadequate information.
- 2) The supplier should submit 3 copies of the following documents relevant to his scope of work, two weeks prior to the commissioning of the unit, free of cost.
  1. Instruction/Testing/Operation manual (3 copies)
  2. Maintenance manual/Lubrication Chart (3 copies)
  3. All final drawings - Electrical, mechanical and civil (3 copies)
  4. Relevant Test Certificates, Guarantee Certificate for each item of equipment.
  5. Catalogue and literature on bought outs (3 copies)
  6. Any other related documents
- 3) The item should be complete with all accessories and interconnections.
- 4) The bidder should attach to their bid detailed specifications, catalogues and other details of all the items quoted by them.
- 5) Calibration certificates with traceability to National Standards shall be supplied for all the instruments coming under the scope of supply of supplier.
- 6) The supplier should submit necessary test certificates as per relevant standards of material used, free of cost.

	<b>HLL LIFECARE LIMITED</b> <b>(A Government of India Enterprise)</b> <b>CENTRAL ENGINEERING DIVISION</b> <b>PEROOKADA PO, THIRUVANANTHAPURAM-</b> <b>695 005, KERALA, INDIA</b> <b>Phn: 0471 – 2437270, 2433374</b>	
	<b>TENDER FOR THE SUPPLY OF FABRICATED</b> <b>COMPONENTS &amp; SPARES FOR ONLINE</b> <b>POWDER FINISHING SYSTEM AT IRAPURAM</b> <b>FACTORY</b>	
<b>PLANT: IFC</b>	<b>REF: IFB No.HLL/CED/IFC/OPFS/FC/2017</b>	<b>DATE :08-02-</b> <b>2017</b>

- 7) The suppliers should submit the following documents, relevant to their scope of work, two weeks prior to the commissioning of the Unit :
- a) All final drawings
  - b) Relevant Test Certificates, Guarantee Certificate for each material which are using for fabrication.
  - c) Any other related documents
- 8) Any deviations from the bid documents shall be clearly indicated.
- 9) The bid should be complete with all the relevant details.

	<b>HLL LIFECARE LIMITED</b> <b>(A Government of India Enterprise)</b> <b>CENTRAL ENGINEERING DIVISION</b> <b>PEROOKADA PO, THIRUVANANTHAPURAM-</b> <b>695 005, KERALA, INDIA</b> <b>Phn: 0471 – 2437270, 2433374</b>	
	TENDER FOR THE SUPPLY OF FABRICATED COMPONENTS & SPARES FOR ONLINE POWDER FINISHING SYSTEM AT IRAPURAM FACTORY	
PLANT: IFC	REF: IFB No.HLL/CED/IFC/OPFS/FC/2017	DATE :08-02-2017

### SCHEDULE III

#### CONDITIONS OF CONTRACT

#### 1. Price

The price quoted should be inclusive of Basic Price, all applicable taxes and duties including VAT, Entry tax, Octroi & other levies, P&F charges, insurance charges etc for supply of items FOR HLL site. The Supplier should pay entry taxes, as applicable and should be included in the offer.

Price quoted should be firm without any escalation till the order is completely executed.

#### 2. Taxes/Duties/Levies

The supplier/contractor shall be entirely responsible for all taxes including entry tax, duties, license fees, etc. incurred until successful completion of contract. All central, state, municipal taxes, duties and levies payable shall be shown by the bidder separately in the Bid. The Purchaser will issue necessary 'C' Form, if required.

#### Note:

The term 'Machine' means the final and complete equipment/machinery as ordered and does not mean raw material, components, consumable, etc. required for the work. The Purchaser shall not be liable to pay any tax/duty/levy incurred during the transactions between the Supplier and his sub-suppliers and or Agents.

#### 3. Insurance

The supplier shall arrange insurance coverage for transit, storage and erection.

#### 4. Delivery/Completion Period

The equipment and its accessories should be delivered within **3WEEKS** from the date of Letter Of Intent or Order.

Time being the essence of the Contract, the delivery, stipulated should be strictly adhered to. Delay in delivery/non delivery of the equipment will cause loss and/or damage to Purchaser. The delivery period shall be counted from the date of sending of Purchaser's intimation of acceptance of the Supplier's offer (Letter of Intent (LOI) and/or order).

	<b>HLL LIFECARE LIMITED</b> <b>(A Government of India Enterprise)</b> <b>CENTRAL ENGINEERING DIVISION</b> <b>PEROOKADA PO, THIRUVANANTHAPURAM-</b> <b>695 005, KERALA, INDIA</b> <b>Phn: 0471 – 2437270, 2433374</b>	
	TENDER FOR THE SUPPLY OF FABRICATED COMPONENTS & SPARES FOR ONLINE POWDER FINISHING SYSTEM AT IRAPURAM FACTORY	
PLANT: IFC	REF: IFB No.HLL/CED/IFC/OPFS/FC/2017	DATE :08-02-2017

## 5. Terms Of Payment

The payment terms offered are as follows: -

- a) 90% of the total value of equipment/s will be paid against supply and acceptance of item/equipments at site.
- b) Balance 10% of the value of the equipment/s will be paid against a Performance Bank Guarantee (from a nationalized bank) equal to 10% of the total contract value valid for the guarantee period of one year.

Tax Deduction: All statutory deductions like Income Tax or any other government-imposed liabilities shall be borne by the Supplier/Contractor (as applicable at the time of execution of job) and shall be deducted from each bill submitted by the Supplier/Contractor.

## 6. Guarantee Period

The Guarantee against any possible manufacturing defects shall be given for a period of 18 months from the date of supply and acceptance of the items at HLL site or 12 months from the date of installation, whichever is earlier.

## 7. Liquidated damages for delays

If the equipment is not supplied to the purchaser within the time stipulated in the Order, Purchaser may at their option, either (1) recover from the Supplier/Contractor liquidated damages at the rate of 0.5 % of the total contract value for every week of delay, subject to a maximum of 7.5 % of the total contract value, or (2) at the risk and cost of the Supplier and without prejudice to the other remedies/rights as per the Contract, terminate the order wholly or partially and complete it themselves or reassign it to other Suppliers/Contractors.

## 8. Inspection And Testing

Purchaser shall have the right of access to the Supplier's/Contractor's works at all reasonable times to inspect and measure the progress of execution of the Order. The Supplier/Contractor should make available all tools, instruments, apparatus, equipment, facilities, services and materials to enable the Purchaser's nominee to carryout such inspection/tests without obligations. Notwithstanding such tests/inspection conducted at the Supplier's works from time to time, goods under the Order shall not be dispatched unless they have been finally inspected by the purchaser or inspection waived and dispatch specifically authorized in writing, wherever inspection during various stages of execution of the order and prior to dispatch are specifically provided for in the order, sufficient advance notice shall be given to the purchaser for the purpose, and as a consequence of such inspection, if necessary, the Supplier shall arrange re-work at his own cost. Notwithstanding any such inspection/tests carried out at Supplier's works, the equipment shall be accepted only after receipt and successful commissioning at the site and the inspection/tests

	<b>HLL LIFECARE LIMITED</b> <b>(A Government of India Enterprise)</b> <b>CENTRAL ENGINEERING DIVISION</b> <b>PEROOKADA PO, THIRUVANANTHAPURAM-</b> <b>695 005, KERALA, INDIA</b> <b>Phn: 0471 – 2437270, 2433374</b>	
	TENDER FOR THE SUPPLY OF FABRICATED COMPONENTS & SPARES FOR ONLINE POWDER FINISHING SYSTEM AT IRAPURAM FACTORY	
PLANT: IFC	REF: IFB No.HLL/CED/IFC/OPFS/FC/2017	DATE :08-02-2017

carried out at Supplier's works will not relieve his contractual obligations for conforming to the specifications under the Order.

#### **9. Performance Guarantee**

The Supplier shall fully guarantee all of the equipment supplied to perform in accordance with the specifications and to be free of all defects in design, material and workmanship. Should any equipment not performing as intended or should the design, material or workmanship prove defective within a period of 12 months from the date of successful commissioning, the equipment shall, upon notification of deficiency or defect, be promptly corrected by the Supplier to the satisfaction of Purchaser without delay and at no extra cost. If the Supplier fails to take proper corrective action to replace or repair the deficiency within a reasonable time of Purchaser's notification to this effect, the Purchaser shall be free to take such corrective action at the Supplier's risk and cost.

#### **10. Scope of Services, Supplies and Materials:**

The scope will include all services, supplies etc. for the satisfactory execution of the Contract except in so far as any of those are expressly excluded.

#### **11. Force Majeure**

- a. Neither the Supplier nor the Purchaser shall be considered in default in the performance of their obligations as per the Contract so long as such performance is prevented or delayed because of strikes, war, hostilities, revolution, civil commotion, epidemics, accidents, fire, cyclone, flood or because of any law and order proclamation, regulation or ordinance of Government or subdivision thereof or because of any act of God. The proof of existence of force majeure shall be provided by the party claiming it to the satisfaction of the other.
- b. The Supplier shall advise Purchaser initially by a Fax, followed by post, the beginning and end of any of the above causes of delay, failing which Purchaser shall not be liable to consider delays due to the above reasons. Notice as stated above should be given even in case where only the Supplier's bids are under the consideration of the Purchaser and no acceptance of the same has been given and detailed order issued.
- c. In the event of definite delay even if arising out of reasons due to force majeure, Purchaser shall have the right at their discretion to cancel the Order or part of the Order without any liability on their part to make any payment to the Supplier while reserving the right to claim refund of and any payment if advanced or paid to Supplier.

#### **12. Assignment And Subletting**

No assignment and subletting of whole or part of the order shall be permitted except with prior approval of purchase obtained in writing.

	<b>HLL LIFECARE LIMITED</b> <b>(A Government of India Enterprise)</b> <b>CENTRAL ENGINEERING DIVISION</b> <b>PEROOKADA PO, THIRUVANANTHAPURAM-</b> <b>695 005, KERALA, INDIA</b> <b>Phn: 0471 – 2437270, 2433374</b>	
	TENDER FOR THE SUPPLY OF FABRICATED COMPONENTS & SPARES FOR ONLINE POWDER FINISHING SYSTEM AT IRAPURAM FACTORY	
PLANT: IFC	REF: IFB No.HLL/CED/IFC/OPFS/FC/2017	DATE :08-02-2017

### **13. Correspondence**

All correspondence relating to this enquiry shall be in English, to:

**Deputy Chief Engineer (CED),**  
HLL Lifecare Limited  
Central Engineering Division,  
Perookada. PO, Thiruvananthapuram – 695005,  
Kerala, India  
Phn: 0471 – 2437270, 2433374  
E-mail: [rajeevrv@lifecarehll.com](mailto:rajeevrv@lifecarehll.com), [krknair@lifecarehll.com](mailto:krknair@lifecarehll.com)

### **14. Indemnification Clause**

The Supplier shall indemnify and hold harmless the Purchaser from and against all claims, liability, loss damage or expense, including counsel fees arising from or by reason of any actual or claimed trade mark, patent or copy right infringement or any litigation based thereon with respect to any part of the items covered by the Contract, and such obligations shall survive acceptance of payment for the items.

### **15. Entirety of the Agreement**

All of the terms agreed to between the Supplier and Purchaser will be included in the Purchase/work Order/Contract and no their communication, proposal or understanding, written, oral or implied, will be considered to be included in the Purchase/work Order/Contract or form part of the Contract between the Supplier and Purchaser unless specifically agreed to in that behalf in writing between Purchaser and Supplier.

### **16. Settlement Of Disputes**

Arbitration shall not be a means of settlement of any dispute or claim arising out of the contract relating to the work. Any disputes or difference arising between the parties with respect to the performance of any part of this agreement or any thing connected therewith, etc shall as far as possible be mutually settled by the process of dialog and negotiation.

The Courts at Thiruvananthapuram alone shall have jurisdiction in respect of settlement of any matter arising out or in connection with the contract.

	<b>HLL LIFECARE LIMITED</b> <b>(A Government of India Enterprise)</b> <b>CENTRAL ENGINEERING DIVISION</b> <b>PEROOKADA PO, THIRUVANANTHAPURAM-</b> <b>695 005, KERALA, INDIA</b> <b>Phn: 0471 – 2437270, 2433374</b>	
	TENDER FOR THE SUPPLY OF FABRICATED COMPONENTS & SPARES FOR ONLINE POWDER FINISHING SYSTEM AT IRAPURAM FACTORY	
PLANT: IFC	REF: IFB No.HLL/CED/IFC/OPFS/FC/2017	DATE :08-02-2017

**SCHEDULE IV**  
**ACCEPTANCE FORM**

*(To be submitted in the letter head of the firm indicating full name and address, telephone & fax numbers etc.)*

From

To

**Deputy Chief Engineer(CED),**  
HLL Lifecare Limited  
Central Engineering Division,  
Peroorkada. PO,  
Thiruvananthapuram – 695005,  
Kerala, India  
Phn: 0471 – 2437270, 2433374  
E-mail: rajeevrv@lifecarehll.com, krknair@lifecarehll.com

Dear Sir,

I / We, hereby offer to design/fabricate/supply/commission as detailed in schedule hereto or such portion thereof as you may specify in the acceptance of Bid at the price given in the price schedule and agree to hold this offer open till 90 days after the date of bid opening prescribed by the purchaser. I/We have understood the terms and conditions mentioned in the invitation for bid and Conditions of Contract furnished by you and have thoroughly examined the specifications in the bid document hereto and are fully aware of the nature of the scope of work required and my/our offer is to comply strictly in accordance with the requirement and the terms and conditions mentioned above.

Yours faithfully,

**SIGNATURE OF THE BIDDER**



**SCHEDULE V****FORMAT FOR QUOTING**

SI No	Description	Unit	Qty	Rate	Amount
01	Wet Tumbler Assembly for TSP as per drawing no. HLL-CED-B2-030-00	Nos.	01		
02	Stand for TSP Wet Tumbler as per drawing no. HLL-CED-B2-027-00	Nos.	01		
03	Tank for TSP as per drawing no.HLL-CED-B2-025-00	Nos.	01		
04	Funnel Assembly for ASW as per drawing no. HLL-CED-B2-028-00	Nos.	02		
05	Wet Tumbler Assembly for ASW as per drawing no.HLL-CED-B2-030-00	Nos.	01		
06	Stand for ASW Wet Tumbler as per drawing no. HLL-CED-B2-034-00	Nos.	01		
07	Height Adjuster as per drawing no.HLL-CED-B2-029-00	Nos.	04		
08	Tank for ASW as per drawing no.HLL-CED-B2-036-00	Nos.	01		
09	Wet Tumbler for ASW as per drawing no.HLL-CED-B2-037-00	Nos.	02		
10	Roller Assembly as per drawing no.HLL-CED-B2-023-00	Nos.	04		
11	Roller Assembly – I as per drawing no.HLL-CED-B2-026-00	Nos.	08		
12	Funnel Assembly for Silica Slurry as per drawing no.HLL-CED-B2-033-00	Nos.	02		
13	Washer for Motor as per drawing no.HLL-CED-B2-031-00	Nos.	02		
14	Parallel Key 6 x 6 x 85 mm as per drawing no.HLL-CED-B2-032-00	Nos.	02		
15	Bearing Assembly for Dehydrator as per drawing no.HLL-CED-B2-039-00	Nos.	02		
16	Funnel Inlet Supply Assembly as per drawing no. HLL-CED-B2-040-00	Nos.	04		
17	Clamping & Routing of Drain Pipe as per drawing no.HLL-CED-B2-038-00	Nos.	01		
18	1 ½" SS 316 Seamless Pipe 16 SWG 2mtr Length Std Item	Nos.	01		
19	3" Y Connector, Material : UPVC 40 Schedule Std Item	Nos.	01		
20	3" Ball Valve, Material : UPVC 40 Schedule Std Item	Nos.	02		
21	2" Pipe SS 316 Seamless Pipe 16 SWG 3mtr Length Std Item	Nos.	01		
22	2" Tee, Material : SS 316 Std Item	Nos.	02		
23	2" Elbow, Material : SS 316 Std Item	Nos.	01		
24	2" Ball Valve, Material : SS 316 Std Item	Nos.	02		
25	2" Coupler, Material : SS 316 Std Item	Nos.	04		

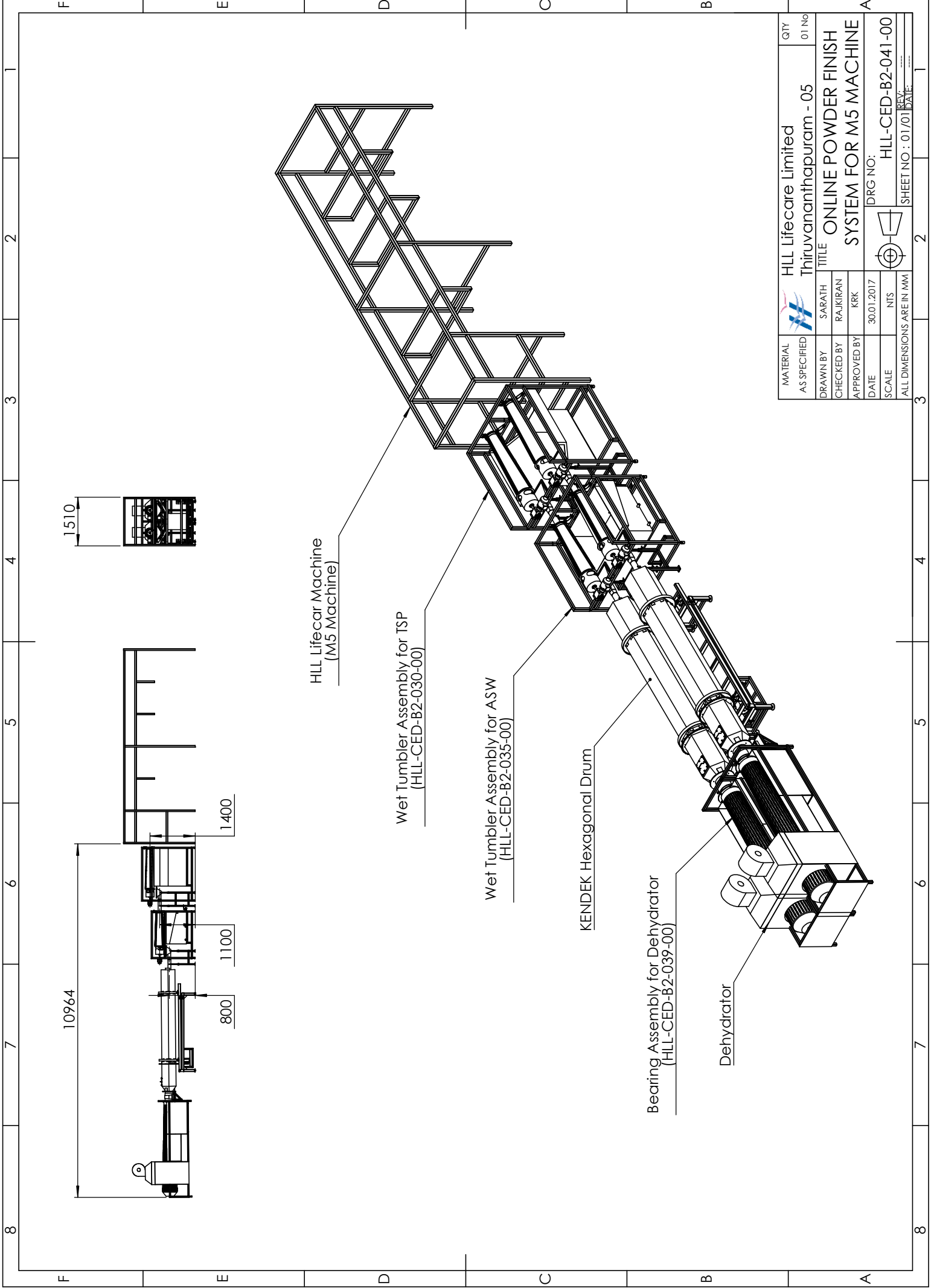
26	2" Nipple, Material : SS 316 Std Item	Nos.	10		
27	2" Universal Joint, Material : SS 316 Std Item	Nos.	03		
28	2" End Cap, Material : SS 316 Std Item	Nos.	01		
29	1 ½ " Ball Valve, Material : SS 316 Std Item	Nos.	03		
30	1 ½ " Tee, Material : SS 316 Std Item	Nos.	02		
31	1 ½ " Universal Joint, Material : SS 316 Std Item	Nos.	03		
32	4" NB Flange with gasket and Fasteners.Std Item	Nos.	04		
33	4" Pipe SS 316 Seamless Pipe 16 SWG 10 mtr Length Std Item	Nos.	01		
34	Dust collection Tray for Dehydrator as per drawing no.HLL-CED-B2-042-00	Nos.	02		
35	2 mm thick SS 316L Sheet 6' x 4'	Nos.	01		

<b>AMOUNT IN RS (EX WORKS)</b>	
<b>EXCISE &amp; OTHER DUTIES</b>	
<b>PACKING &amp; FORWARDING CHARGES</b>	
<b>SALES TAX &amp; OTHER TAXES, IF ANY</b>	
<b>ENTRY TAX, OCTROI AND OTHER LEVIES, IF ANY</b>	
<b>FREIGHT CHARGES INCLUDING TRANSIT INSURANCE</b>	
<b>SUPPLY PRICE F.O.R HLL SITE, IRAPURAM FACTORY, RUBBER PARK, VALAYANCHIRANGARA PO,ERNAKUALAM (DIST),KERALA</b>	

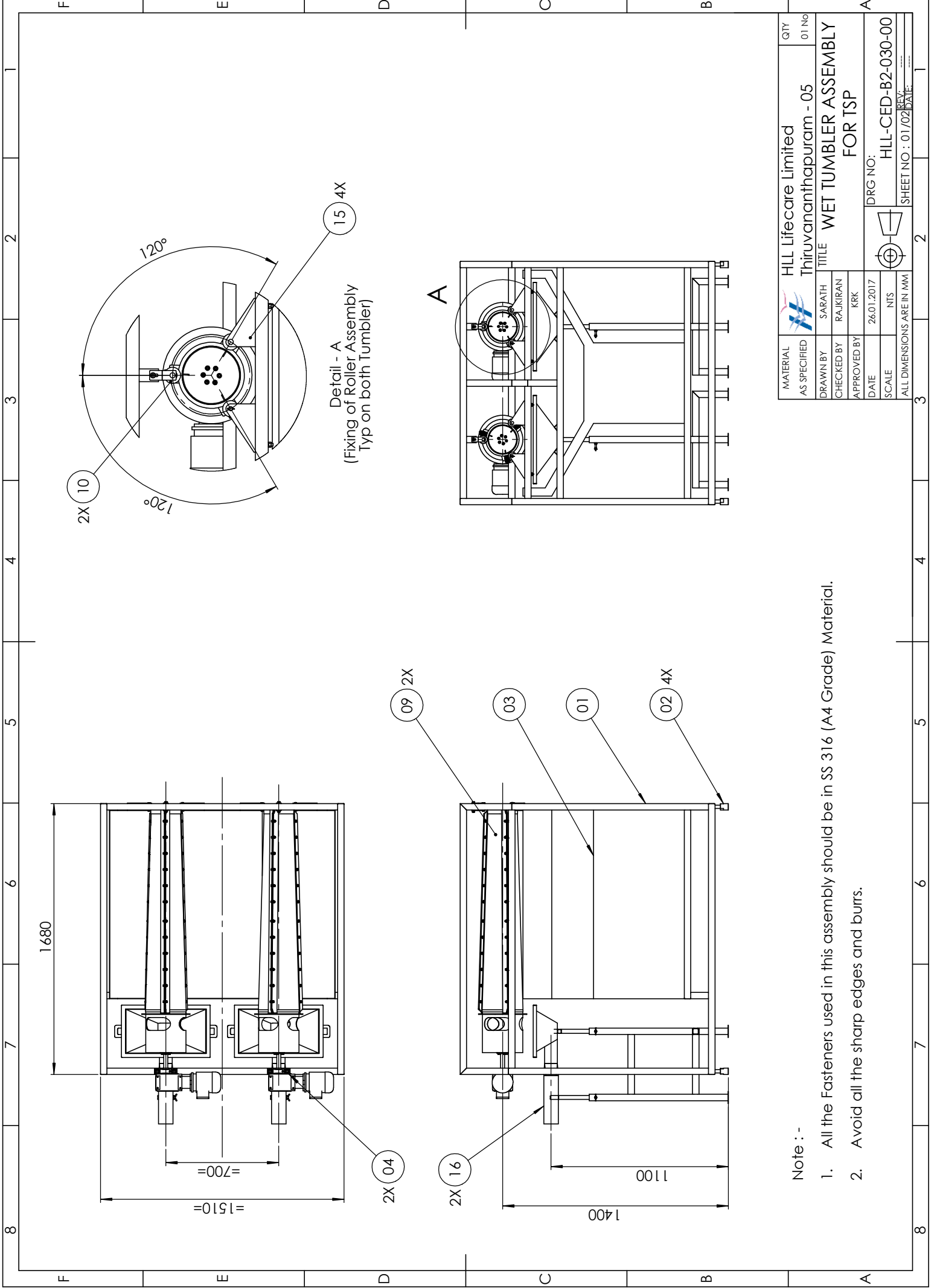
**(RUPEES IN WORDS)**

I hereby agree to supply/execute the item/work specified at the above quoted rate/amount.

**SUPPLIER/CONTRACTOR**



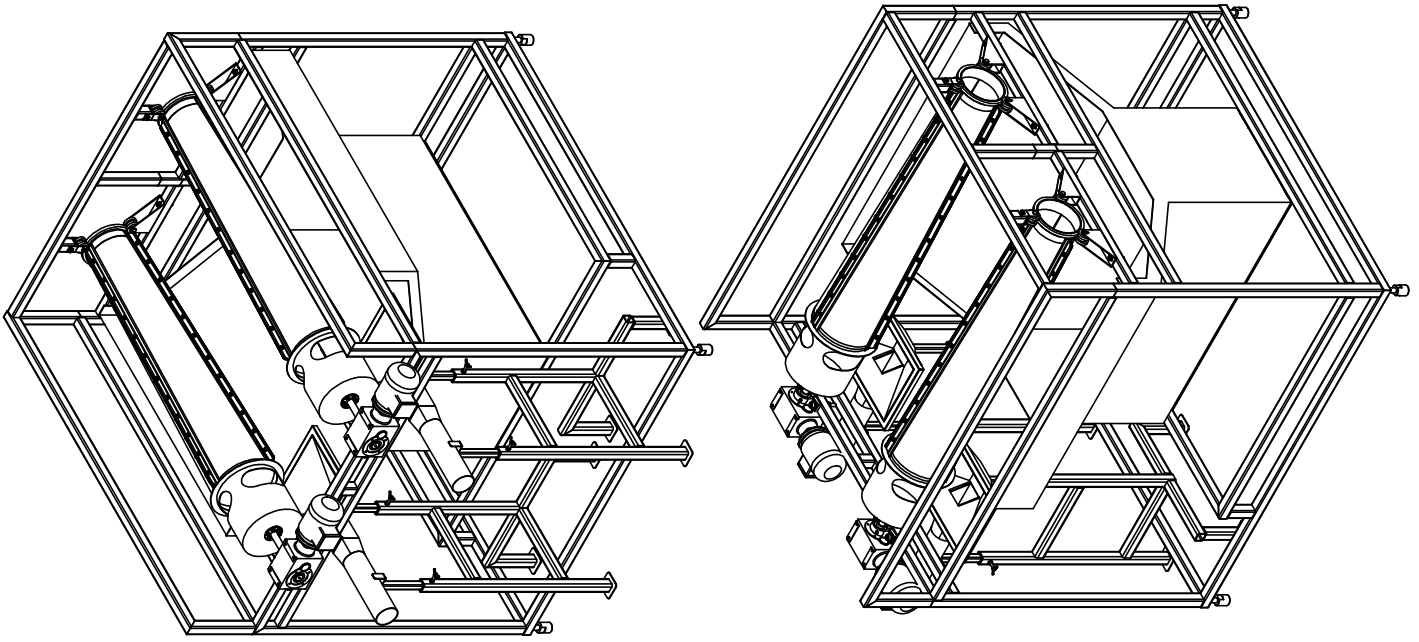
MATERIAL AS SPECIFIED	HLL Lifecare Limited Thiruvananthapuram - 05			QTY	01
DRAWN BY	SARATH	TITLE		ONLINE POWDER FINISH SYSTEM FOR M5 MACHINE	
CHECKED BY	RAJIRAN	APPROVED BY		KRK	
DATE	30.01.2017	DRG NO:		HLL-CED-B2-041-00	
SCALE	NITS	SHEET NO :		01/01	
ALL DIMENSIONS ARE IN MM					



Note :-

1. All the Fasteners used in this assembly should be in SS 316 (A4 Grade) Material.
2. Avoid all the sharp edges and burrs.

MATERIAL AS SPECIFIED	HLL Lifecare Limited Thiruvananthapuram - 05		QTY	01
DRAWN BY	SARATH	TITLE	WET TUMBLER ASSEMBLY FOR TSP	
CHECKED BY	RAJIKRAN	APPROVED BY	KRK	
DATE	26.01.2017	SCALE	NITS	
ALL DIMENSIONS ARE IN MM			DRG NO:	HLL-CED-B2-030-00
			SHEET NO :	01/02



SI No	Description	Drawing No	Material	Qty
01	Stand for TSP Wet Tumbler	HLL-CED-B2-027-00	As Specified	01 No
02	Height Adjuster	HLL-CED-B2-029-00	SS 316 L	04 Nos
03	Tank for TSP	HLL-CED-B2-025-00	As Specified	01 No
04	Pillow Block Bearing UCP 205	Make : NTN/SKF	---	02 Nos
05	M12 x 75 mm SHD Bolt	Std Item	SS 316	04 Nos
06	M12 Plain Washer	Std Item	SS 316	08 Nos
07	M12 Spring Washer	Std Item	SS 316	04 Nos
08	M12 Hexagonal Nut	Std Item	SS 316	04 Nos
09	Wet Tumbler for TSP	HLL-CED-B2-024-00	As Specified	02 Nos
10	Roller Assembly	HLL-CED-B2-023-00	As Specified	02 Nos
11	M8 x 60 mm SHD Bolt	Std Item	SS 316	06 Nos
12	M8 Plain Washer	Std Item	SS 316	12 Nos
13	M8 Spring Washer	Std Item	SS 316	06 Nos
14	M8 Hexagonal Nut	Std Item	SS 316	06 Nos
15	Roller Assembly-1	HLL-CED-B2-026-00	As Specified	04 Nos
16	Funnel Assembly for ASW	HLL-CED-B2-028-00	As Specified	02 Nos
17	Geared Motor	Std Item	---	02 Nos
18	Washer for Motor	HLL-CED-B2-031-00	SS 316	02 Nos
19	M5 x 25 mm SHD Bolt	Std Item	SS 316	02 Nos
20	Parallel Key 6 x 6 x 85 mm	HLL-CED-B2-032-00	SS 316 L	02 Nos

**Gear Motor Specifications**

SK ISI-140-IEC63-63 L/4TF

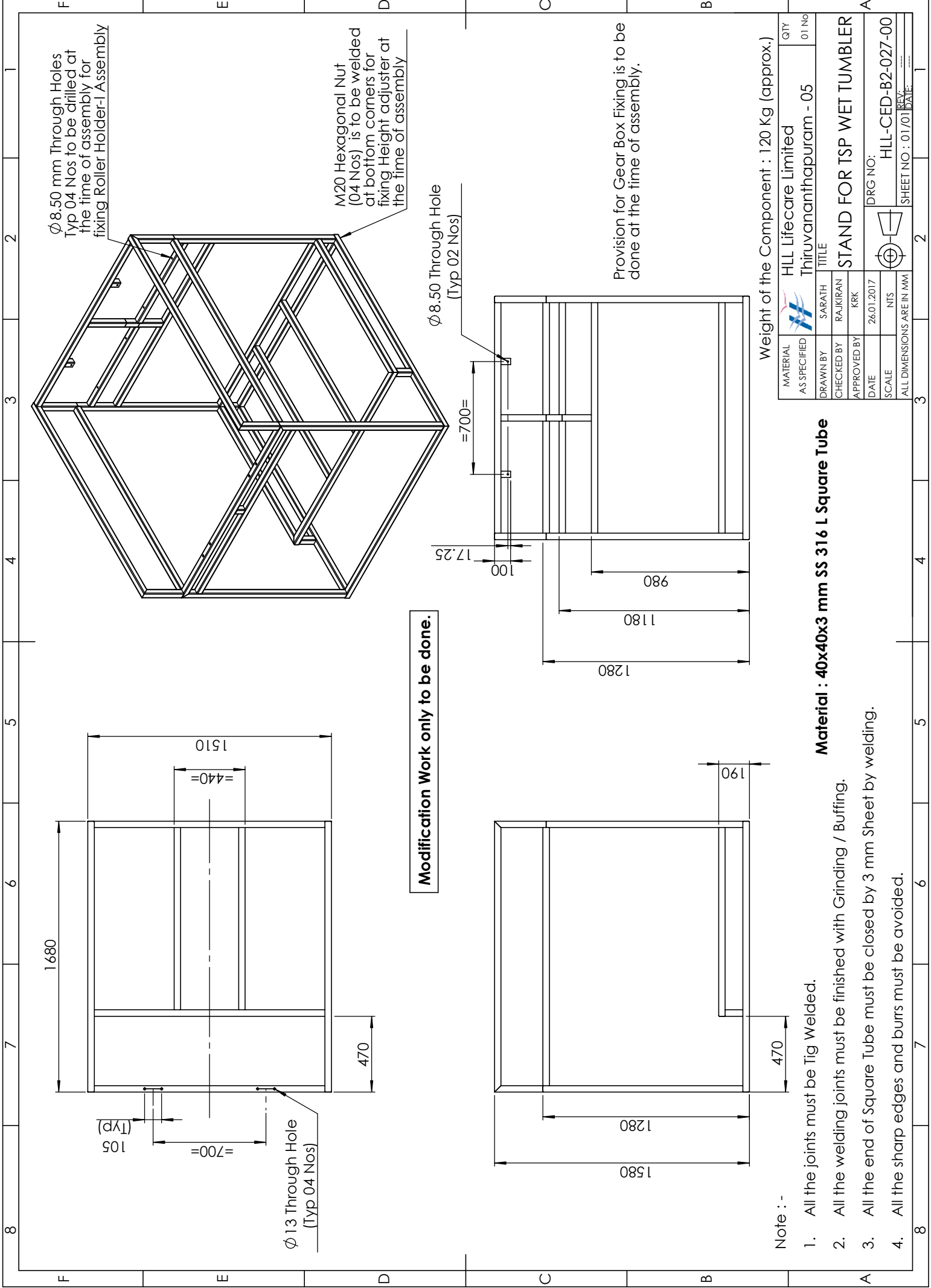
Power : 0.18 KW

Input RPM : 1360

Output RPM : 26

Make : Nord

MATERIAL	HLL Lifecare Limited Thiruvananthapuram - 05			QTY	01 No
DRAWN BY	SARATH	TITLE	WET TUMBLER ASSEMBLY		
CHECKED BY	RAJIRAN	APPROVED BY	FOR TSP		
DATE	26.01.2017	SCALE	N1S		
ALL DIMENSIONS ARE IN MM			DRG NO:	HLL-CED-B2-030-00	
			REV	DATE	



Ø 8.50 mm Through Holes  
Typ 04 Nos to be drilled at  
the time of assembly for  
fixing Roller Holder-I Assembly

M20 Hexagonal Nut  
(04 Nos) is to be welded  
at bottom corners for  
fixing Height adjuster at  
the time of assembly

Ø 8.50 Through Hole  
(Typ 02 Nos)

Provision for Gear Box Fixing is to be  
done at the time of assembly.

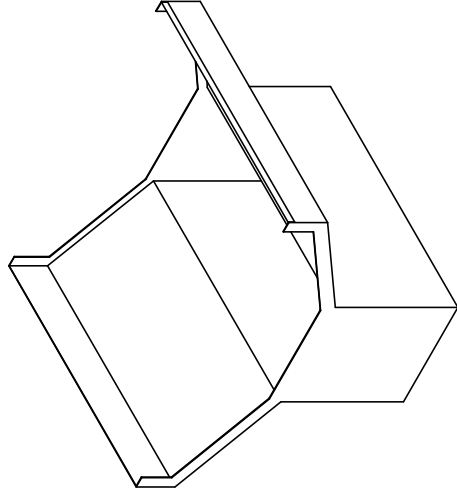
**Modification Work only to be done.**

Weight of the Component : 120 Kg (approx.)

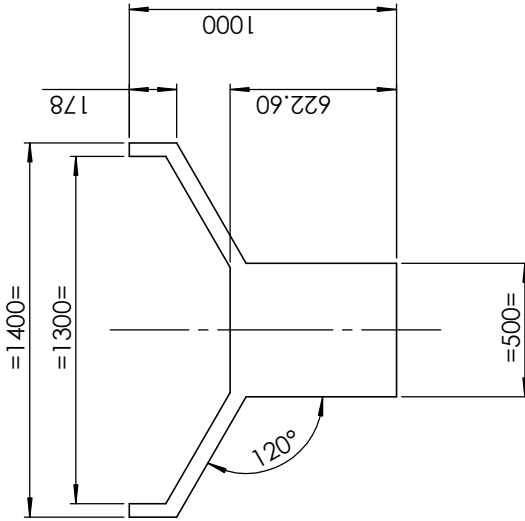
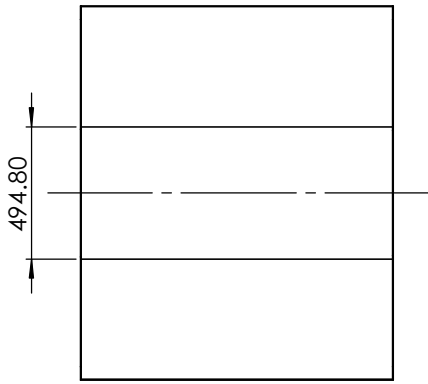
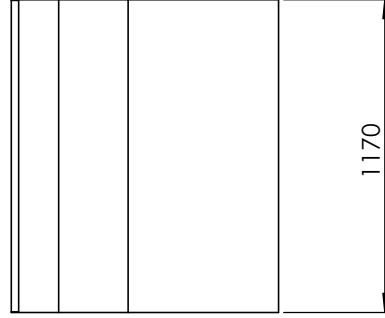
MATERIAL AS SPECIFIED	HLL Lifecare Limited	QTY	01 No
DRAWN BY	SARATH	TITLE	STAND FOR TSP WET TUMBLER
CHECKED BY	RAJIRAN	DRG NO:	HLL-CED-B2-027-00
APPROVED BY	KRK	REV.	
DATE	26.01.2017	DATE	
SCALE	NIS	SHEET NO :	01/01
ALL DIMENSIONS ARE IN MM			

**Material : 40x40x3 mm SS 316 L Square Tube**

- Note :-
1. All the joints must be Tig Welded.
  2. All the welding joints must be finished with Grinding / Buffing.
  3. All the end of Square Tube must be closed by 3 mm Sheet by welding.
  4. All the sharp edges and burrs must be avoided.



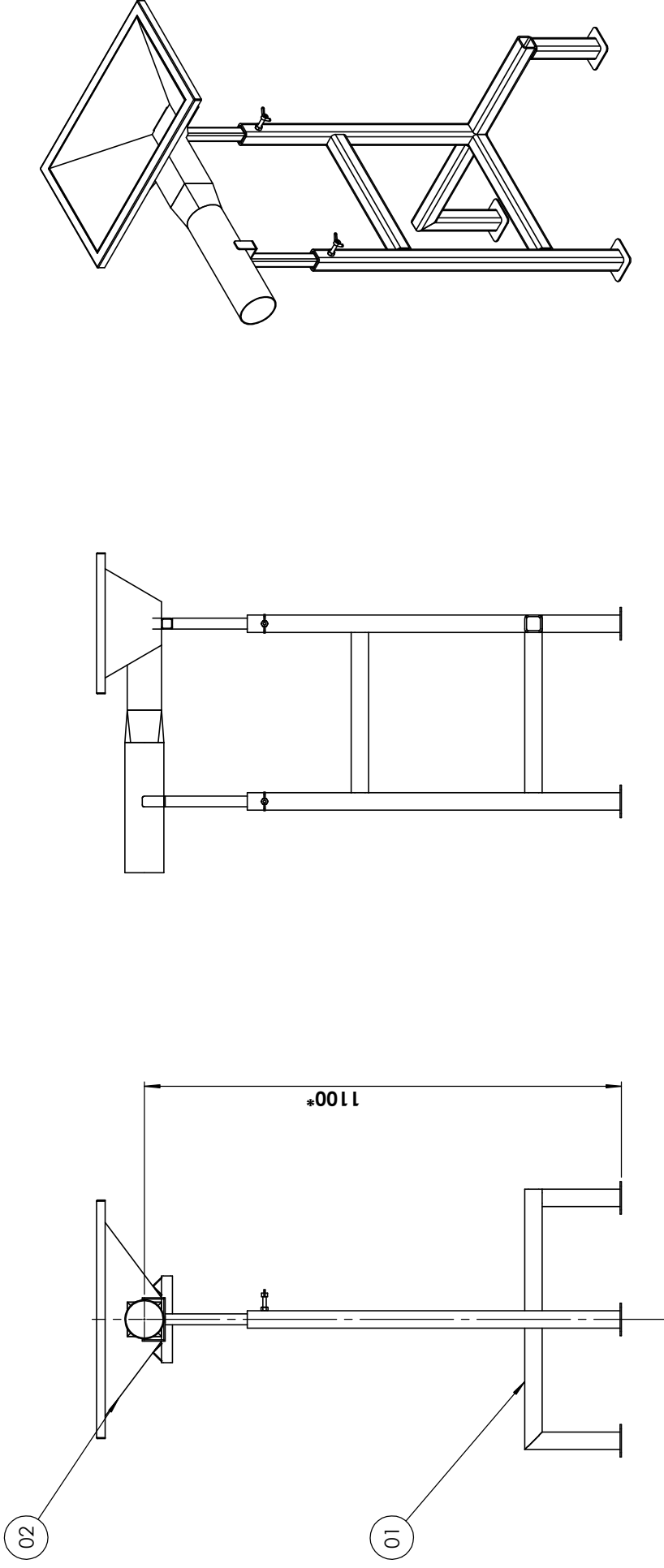
**Modification Work Only to be done.**



Note :-

1. All welded joints must be Tig Welding.
2. Welded joints must be finished with Grinding / Buffing.
3. All the sharp edges and burrs must be avoided.

MATERIAL 12 SWG Sheet SS 316 L	HLL Lifecare Limited Thiruvananthapuram - 05		QTY 01 No
DRAWN BY SARATH	TITLE TANK FOR TSP		DRG NO: HLL-CED-B2-025-00
CHECKED BY RAJIRAN	APPROVED BY KRK		
DATE 20.01.2016	SCALE N1S		SHEET NO : 01/01
ALL DIMENSIONS ARE IN MM			DATE

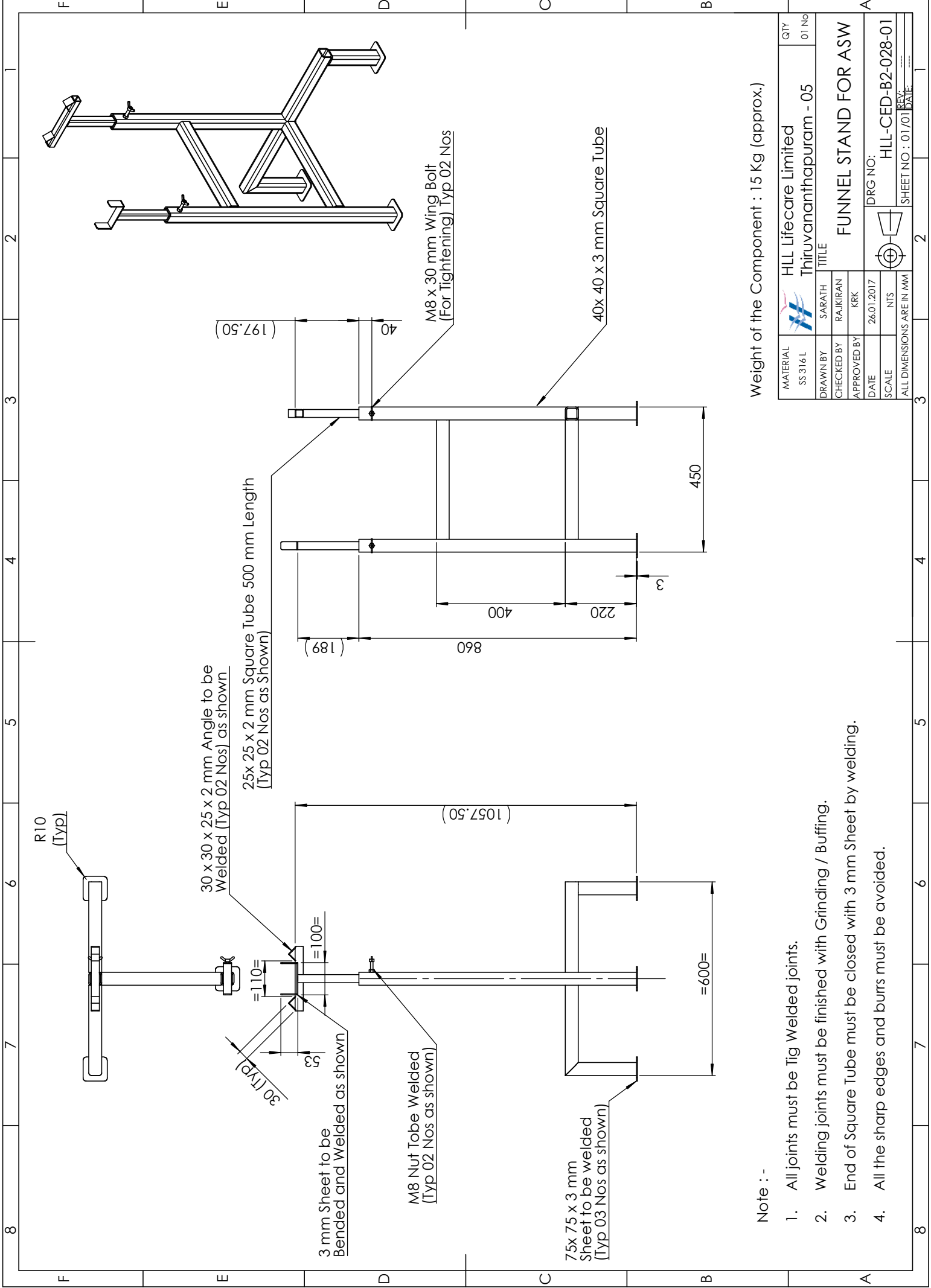


\* Centre Distance of Funnel Output can varies from 930 mm to 1330 mm

SI No	Description	Drawing No	Material	Qty
01	Funnel Stand for ASW	HLL-CED-B2-028-01	SS 316 L	01 No
02	Funnel for ASW	HLL-CED-B2-028-02	SS 316 L	01 No

MATERIAL AS SPECIFIED	HLL Lifecare Limited Thiruvananthapuram - 05		QTY 01 No
DRAWN BY	SARATH	TITLE	
CHECKED BY	RAJIRAN	FUNNEL ASSEMBLY FOR ASW	
APPROVED BY	KRK		
DATE	26.01.2017	DRG NO:	HLL-CED-B2-028-00
SCALE	NIS		
ALL DIMENSIONS ARE IN MM			
		REV	DATE
		1	01/01



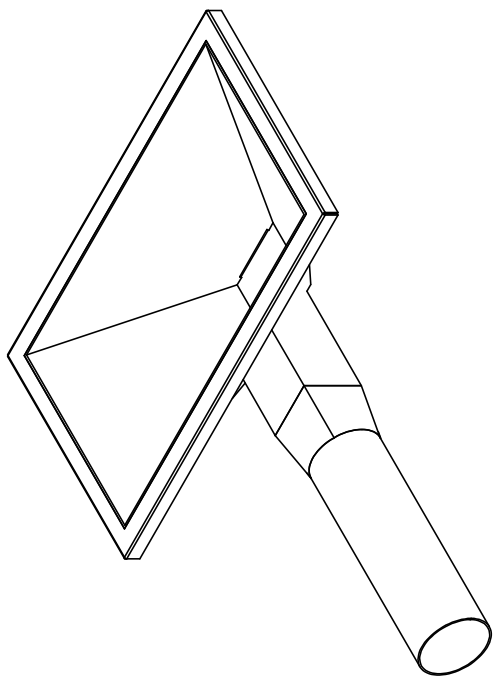


Weight of the Component : 15 Kg (approx.)

MATERIAL SS 316 L	HLL Lifecare Limited Thiruvananthapuram - 05	QTY 01 NO
DRAWN BY SARATH	TITLE FUNNEL STAND FOR ASW	
CHECKED BY RAJIRAN		
APPROVED BY KRK		
DATE 26.01.2017	DRG NO: HLL-CED-B2-028-01	
SCALE NITS		
ALL DIMENSIONS ARE IN MM		

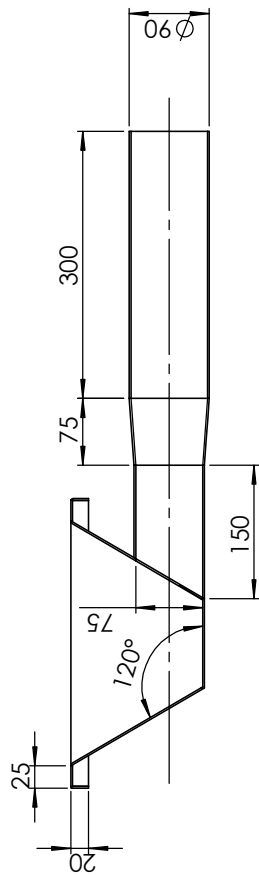
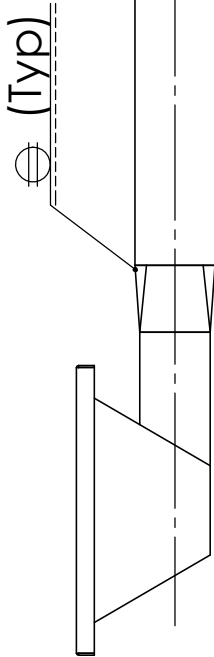
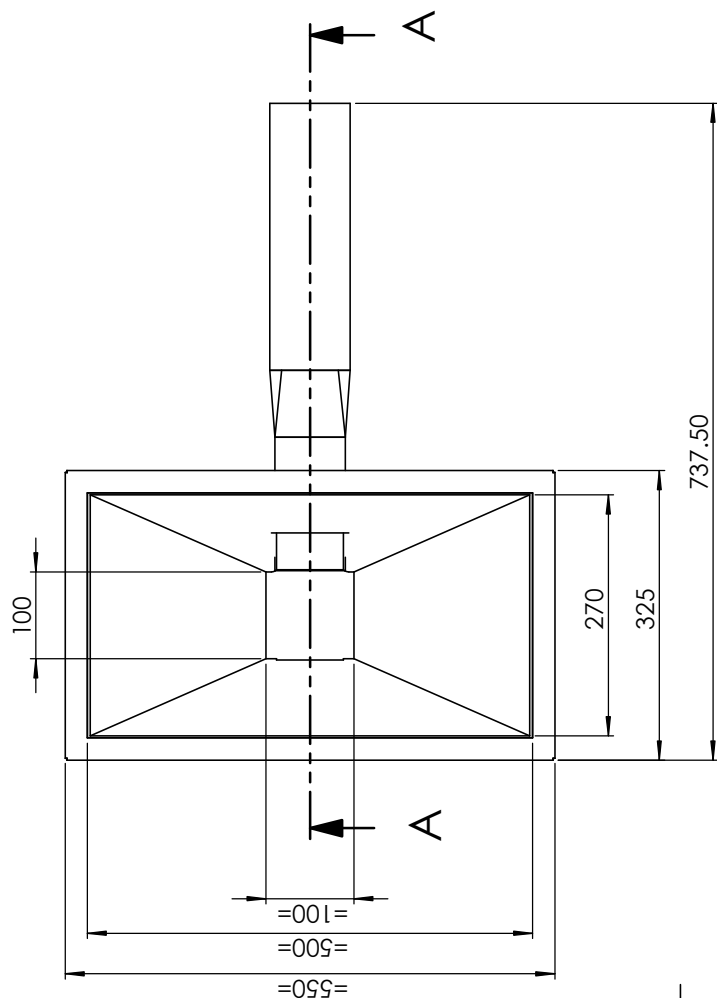
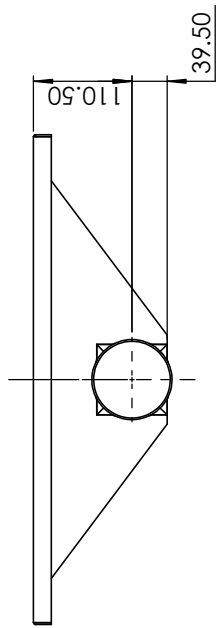
Note :-

1. All joints must be Tig Welded joints.
2. Welding joints must be finished with Grinding / Buffing.
3. End of Square Tube must be closed with 3 mm Sheet by welding.
4. All the sharp edges and burrs must be avoided.



Note :-

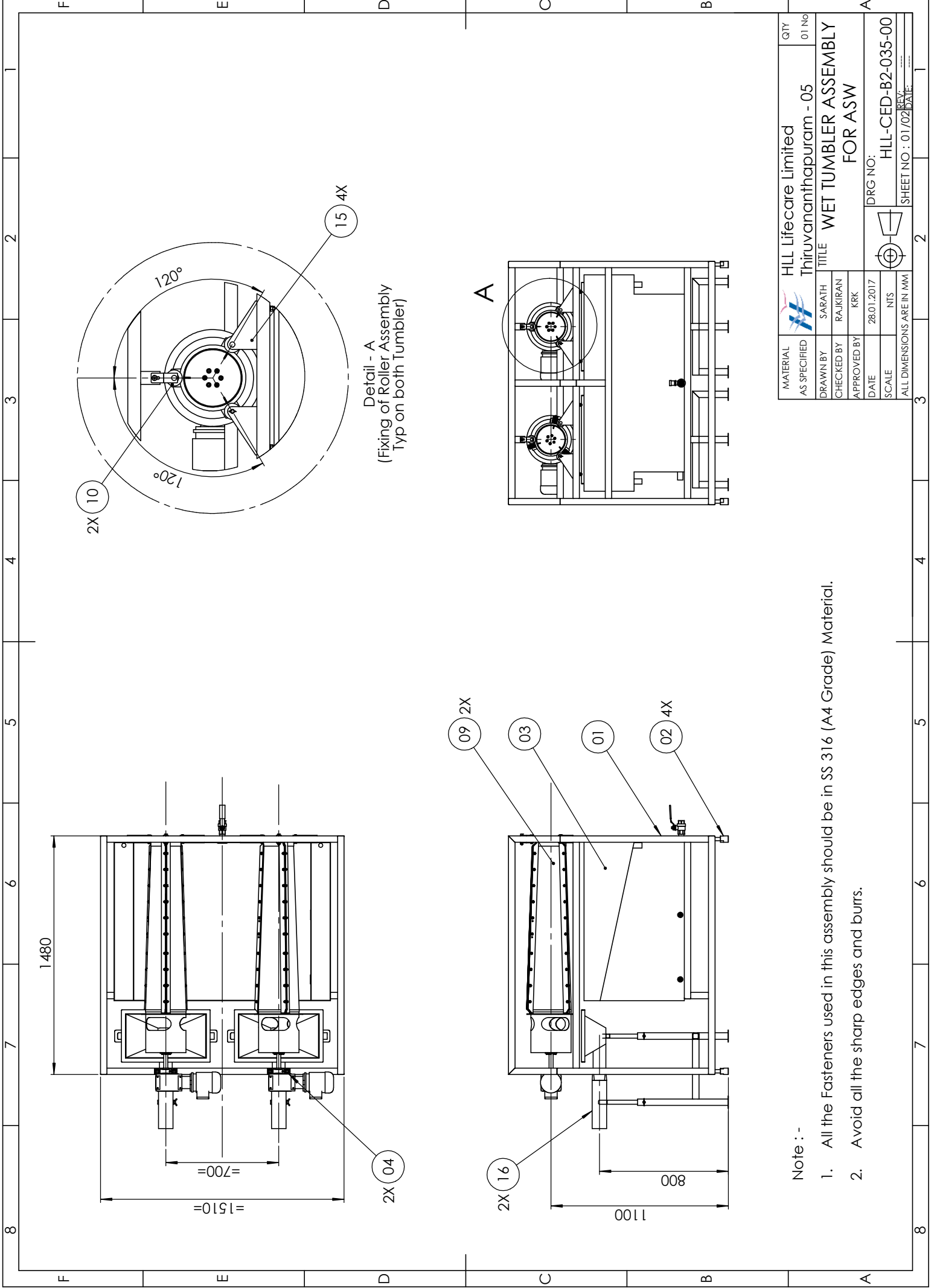
1. All the joints must be Tig Welded.
2. Welded joints must be finished with Grinding / Buffing.
3. All the sharp edges and burrs must be avoided.



Section A-A

Weight of the Component : 8 Kg (approx.)

MATERIAL SS 316 L	HLL Lifecare Limited	QTY 01 NO
14 SWG SHEET	Thiruvananthapuram - 05	
DRAWN BY SARATH	TITLE FUNNEL FOR ASW	
CHECKED BY RAJIRAN		
APPROVED BY KRK		
DATE 26.01.2017	DRG NO: HLL-CED-B2-028-02	
SCALE NITS		
ALL DIMENSIONS ARE IN MM	SHEET NO : 01/01	REV. DATE

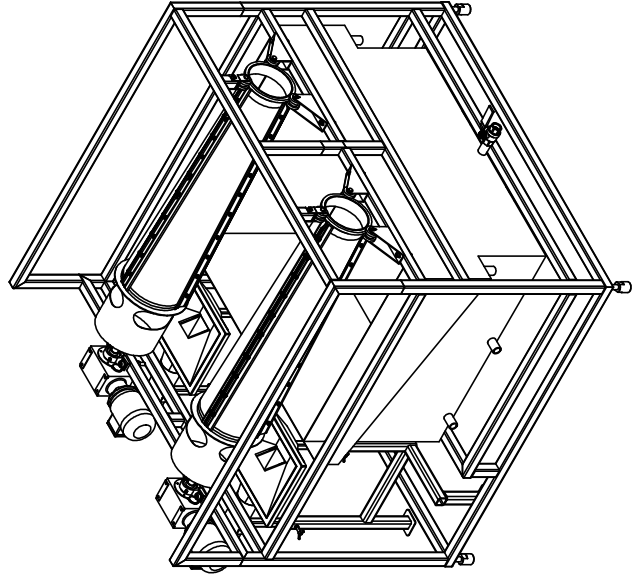
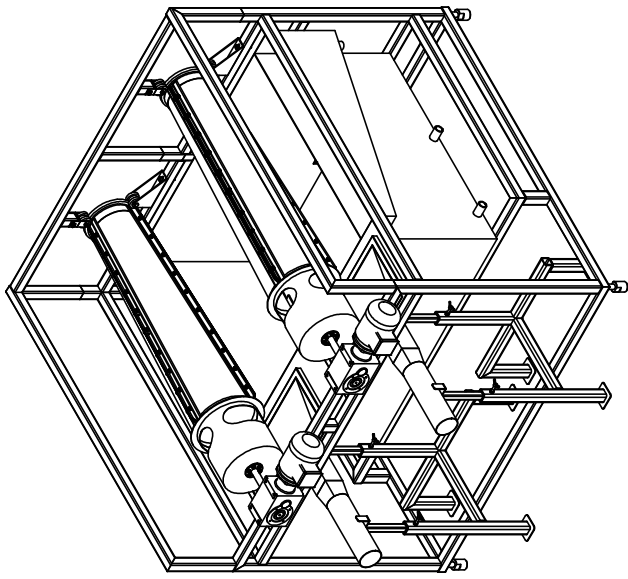


Detail - A  
(Fixing of Roller Assembly  
Typ on both Tumbler)

Note :-

1. All the Fasteners used in this assembly should be in SS 316 (A4 Grade) Material.
2. Avoid all the sharp edges and burrs.

MATERIAL AS SPECIFIED	HLL Lifecare Limited Thiruvananthapuram - 05		QTY	01
DRAWN BY	SARATH			
CHECKED BY	RAJIKRAN			
APPROVED BY	KRK			
DATE	28.01.2017			
SCALE	NITS			
ALL DIMENSIONS ARE IN MM				
TITLE WET TUMBLER ASSEMBLY FOR ASW			DRG NO:	HLL-CED-B2-035-00
SHEET NO : 01/02			REV	



**Gearred Motor Specifications**

SK ISI-140-IEC63-63 L/4TF

Power : 0.18 KW

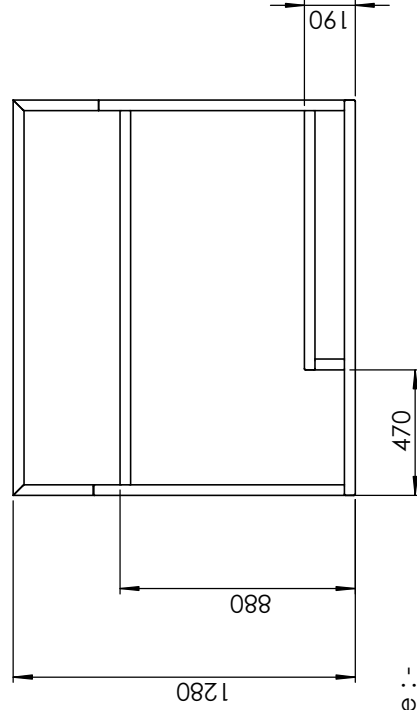
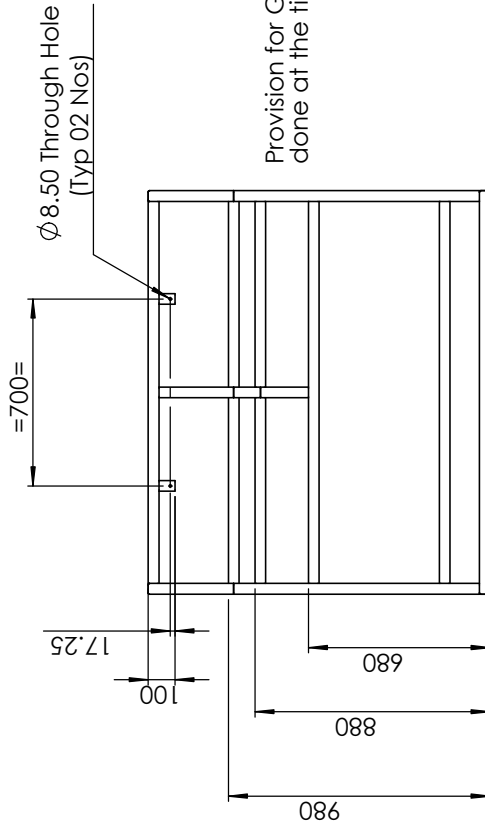
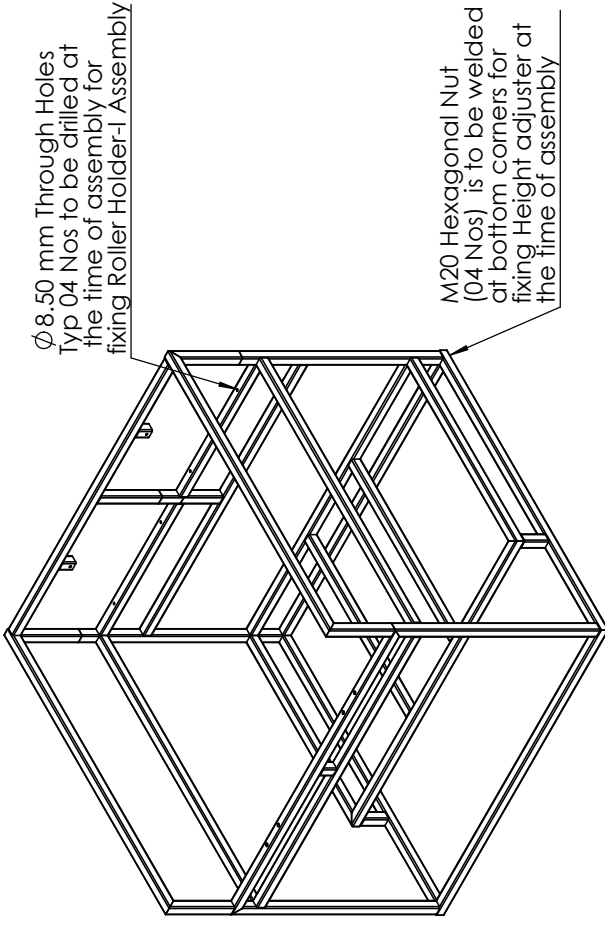
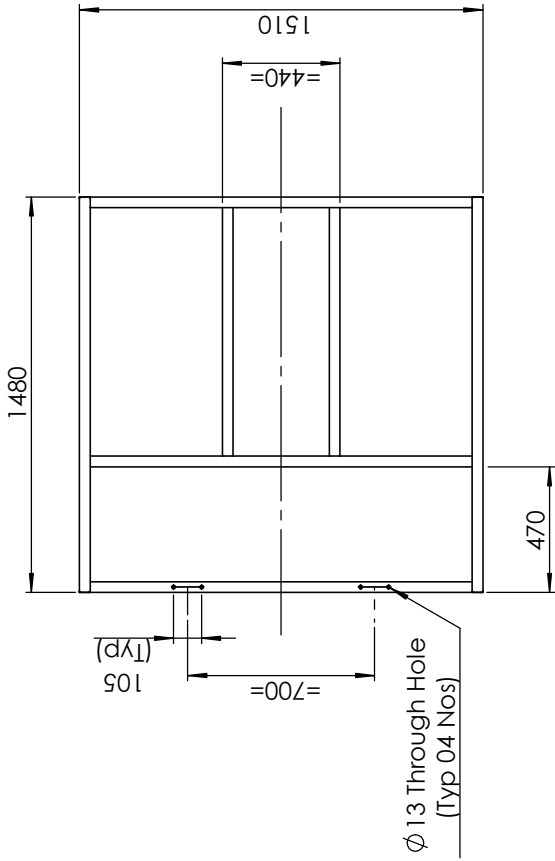
Input RPM : 1360

Output RPM : 26

Make : Nord

SI No	Description	Drawing No	Material	Qty
01	Stand for ASW Wet Tumbler	HLL-CED-B2-034-00	As Specified	01 No
02	Height Adjuster	HLL-CED-B2-029-00	SS 316 L	04 Nos
03	Tank for ASW	HLL-CED-B2-036-00	As Specified	01 No
04	Pillow Block Bearing UCP 205	Make : NTN/SKF/NMB	---	02 Nos
05	M12 x 75 mm SHD Bolt	Std Item	SS 316	04 Nos
06	M12 Plain Washer	Std Item	SS 316	08 Nos
07	M12 Spring Washer	Std Item	SS 316	04 Nos
08	M12 Hexagonal Nut	Std Item	SS 316	04 Nos
09	Wet Tumbler for ASW	HLL-CED-B2-037-00	As Specified	02 Nos
10	Roller Assembly	HLL-CED-B2-023-00	As Specified	02 Nos
11	M8 x 60 mm SHD Bolt	Std Item	SS 316	06 Nos
12	M8 Plain Washer	Std Item	SS 316	12 Nos
13	M8 Spring Washer	Std Item	SS 316	06 Nos
14	M8 Hexagonal Nut	Std Item	SS 316	06 Nos
15	Roller Assembly-I	HLL-CED-B2-026-00	As Specified	04 Nos
16	Funnel Assembly for Silica Slurry	HLL-CED-B2-033-00	As Specified	02 Nos
17	Gearred Motor	Std Item	---	02 Nos
18	Washer for Motor	HLL-CED-B2-031-00	SS 316	02 Nos
19	M5 x 25 mm SHD Bolt	Std Item	SS 316	02 Nos
20	Parallel Key 6 x 6 x 85 mm	HLL-CED-B2-032-00	SS 316 L	02 Nos

MATERIAL	HLL Lifecare Limited Thiruvananthapuram - 05			QTY	01 No
DRAWN BY	SARATH	TITLE	WET TUMBLER ASSEMBLY		
CHECKED BY	RAJIKRAN	FOR ASW			
APPROVED BY	KRK				
DATE	28.01.2017				
SCALE	NIS				
ALL DIMENSIONS ARE IN MM					
		DRG NO:	HLL-CED-B2-035-00		
		REV		DATE	



Provision for Gear Box Fixing is to be done at the time of assembly.

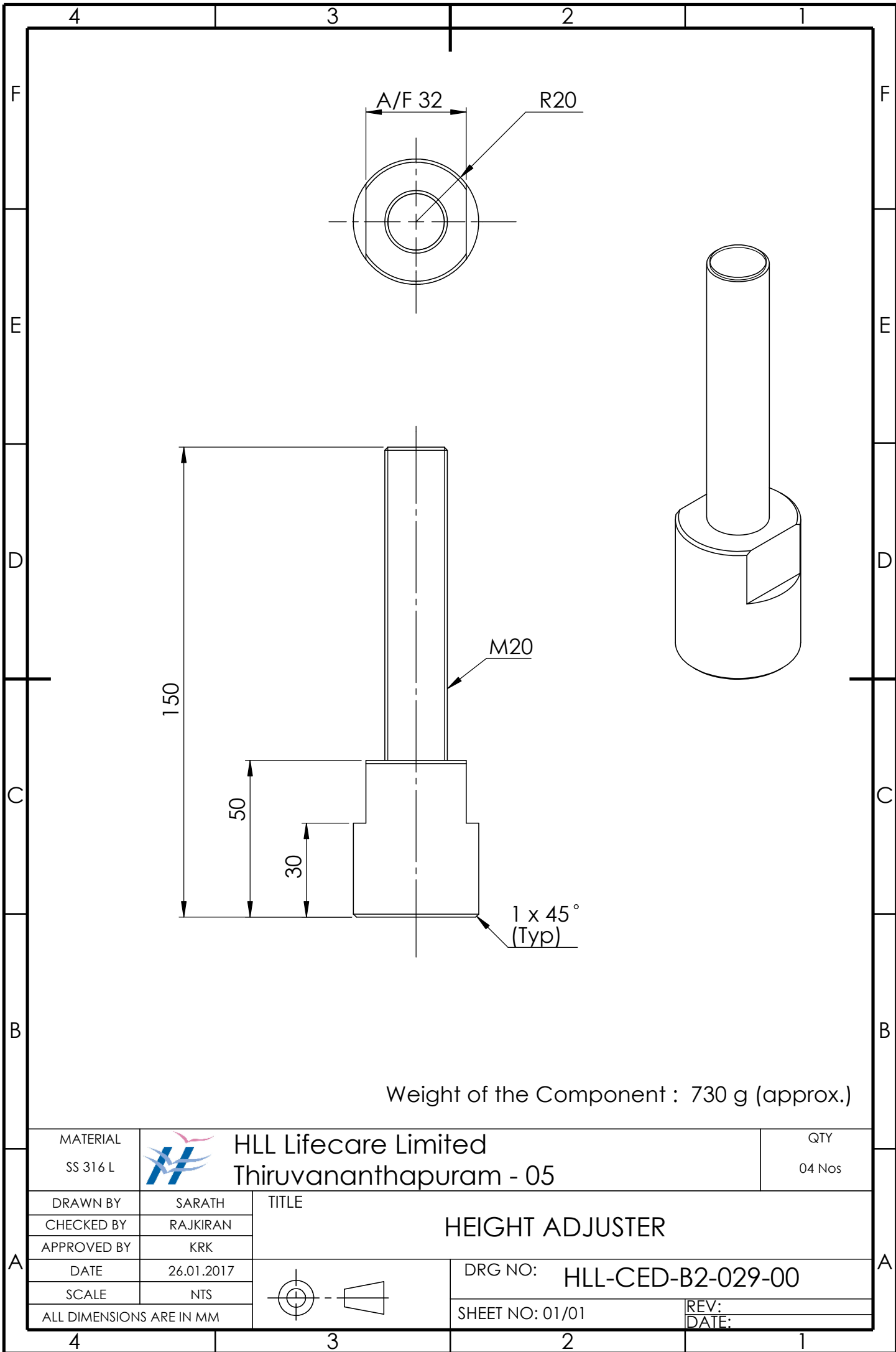
Note :-

1. All the joints must be Tig Welded.
2. All the welding joints must be finished with Grinding / Buffing.
3. All the end of Square Tube must be closed by 3 mm Sheet by welding.
4. All the sharp edges and burrs must be avoided.


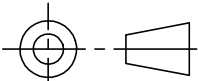
Weight of the Component : 108 Kg (approx.)

MATERIAL AS SPECIFIED	HLL Lifecare Limited Thiruvananthapuram - 05	QTY	01 No
DRAWN BY	SARATH	TITLE	STAND FOR ASW WET TUMBLER
CHECKED BY	RAJIRAN	DRG NO:	HLL-CED-B2-034-00
APPROVED BY	KRK	REV:	
DATE	26.01.2017	SHEET NO :	01/01
SCALE	NIS	DATE	
ALL DIMENSIONS ARE IN MM			

**Material : 40x40x3 mm SS 316 L Square Tube**



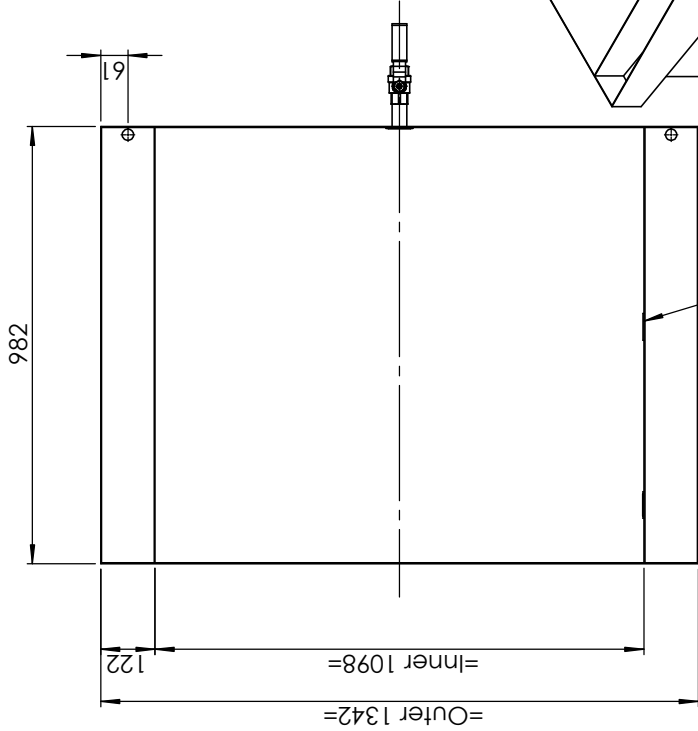
Weight of the Component : 730 g (approx.)

MATERIAL		HLL Lifecare Limited	QTY
SS 316 L		Thiruvananthapuram - 05	04 Nos
DRAWN BY	SARATH	TITLE <b>HEIGHT ADJUSTER</b>	
CHECKED BY	RAJKIRAN		
APPROVED BY	KRK		
DATE	26.01.2017		DRG NO: HLL-CED-B2-029-00
SCALE	NTS		SHEET NO: 01/01
ALL DIMENSIONS ARE IN MM			DATE: _____

Sl No	Description	Drawing No	Material	Qty
01	Filter	HLL-CED-B2-036-01	SS 316 L	03 Nos
02	Level Indicator	--	PU Tube	01 No
03	Circulating Pump*	Std Item	--	01 No
04	1" Ball Valve	Std Item	SS 316	02 Nos
05	1" Seamless Tube 16 SWG 3mtr Length	Std Item	SS 316	01 No
06	1" Elbow	Std Item	SS 316	06 Nos
07	1" Tee	Std Item	SS 316	02 Nos
08	1" Coupler	Std Item	SS 316	02 Nos
09	3/4" Seamless Tube 16 SWG 3mtr Length	Std Item	SS 316	01 No
10	3/4" Elbow	Std Item	SS 316	02 Nos
11	1" Nipple for Level Indicator	Std Item	SS 316	02 Nos

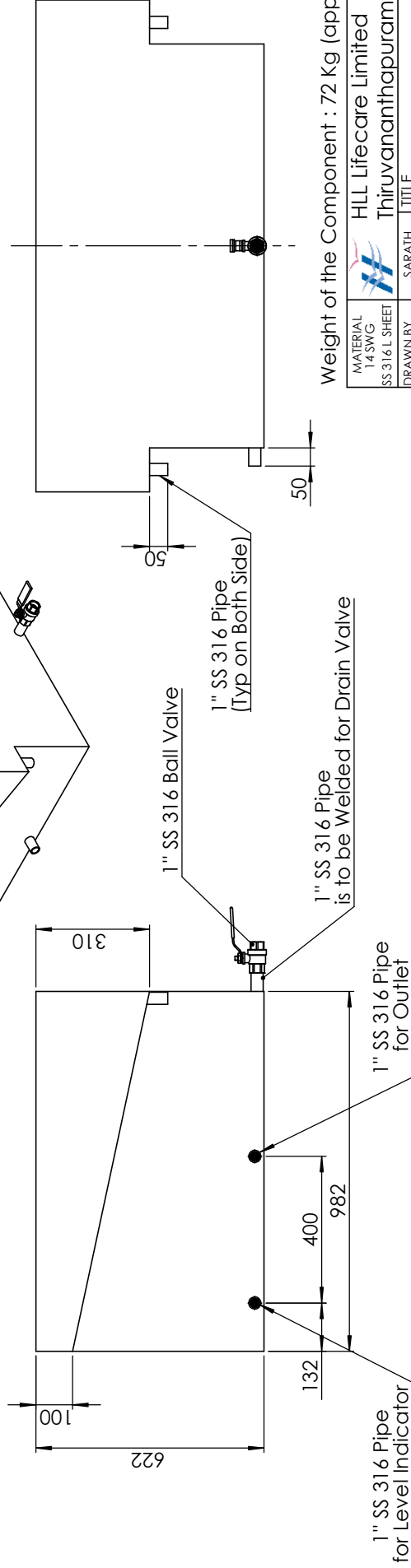
**\* Circulating Pump Details**

Type - Centrifugal Mono block Chemical Pump for Alkyl Trimethyl Ammonium Chloride  
Capacity - 6 Ltrs/Minute  
Motor (KW) : 0.75  
Rating : 415 V, 3 Phase AC  
Operation Cycle : Continuous  
IP Rating : IP 65  
Pump Arrangement - Horizontal  
Suction Size - 1"  
Discharge Size - 3/4"  
Suction Condition - Self Priming  
Temperature (°C) - 40-60



Filter (HLL-CED-B2-036-01)

Typ.03 Nos are to be welded in openings



Weight of the Component : 72 Kg (approx.)

MATERIAL	14 SWG	SS 316 L SHEET	QTY	01 No
DRAWN BY	SARATH	TITLE	HLL Lifecare Limited Thiruvananthapuram - 05	
CHECKED BY	RAJIRAN		TANK FOR ASW	
APPROVED BY	KRK		DRG NO: HLL-CED-B2-036-00	
DATE	30.01.2017		SHEET NO : 01/01 REV. DATE	
SCALE	NIS			
ALL DIMENSIONS ARE IN MM				

Note :-

1. All welded joints must be Tig Welded.
2. Welding joints must be finished with Grinding / Buffing.

4

3

2

1

F

F

E

E

D

D

C

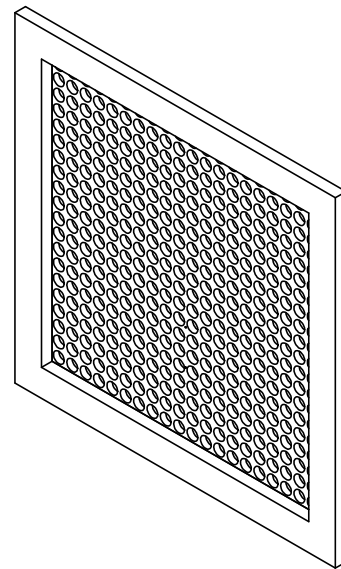
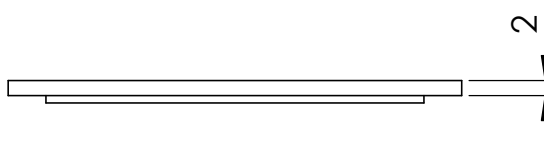
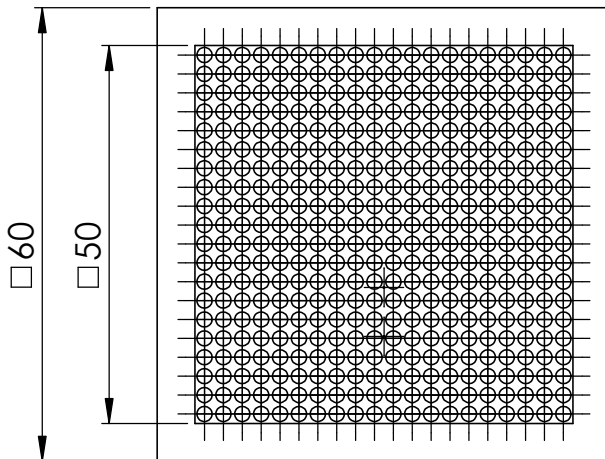
C

B

B


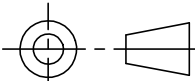
A

A



SS 316 L 18 SWG Perforated Sheet is to welded.

Weight of the Component : 30 g (approx.)

MATERIAL SS 316 L		HLL Lifecare Limited Thiruvananthapuram - 05	QTY 03 Nos
DRAWN BY SARATH	CHECKED BY RAJKIRAN	TITLE FILTER	
APPROVED BY KRK	DATE 30.01.2017	DRG NO: HLL-CED-B2-036-01	
SCALE NTS		SHEET NO: 01/01	REV: DATE:
ALL DIMENSIONS ARE IN MM			

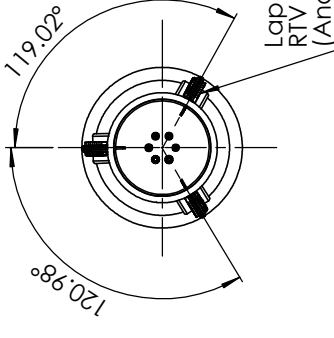
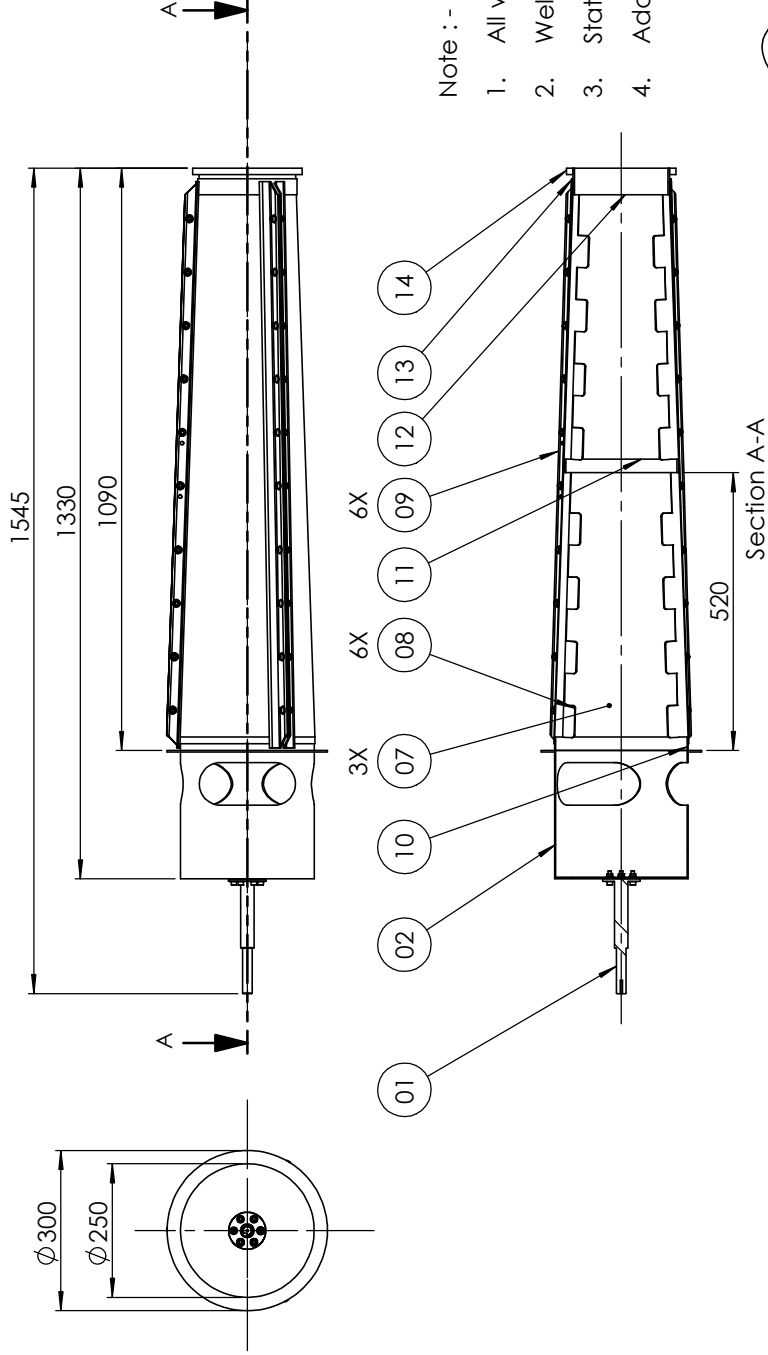
4

3

2

1

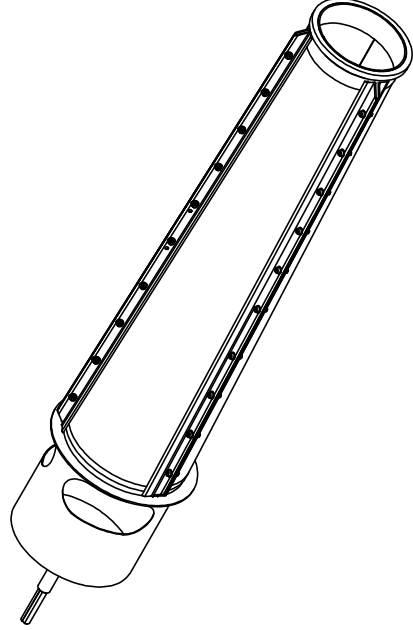




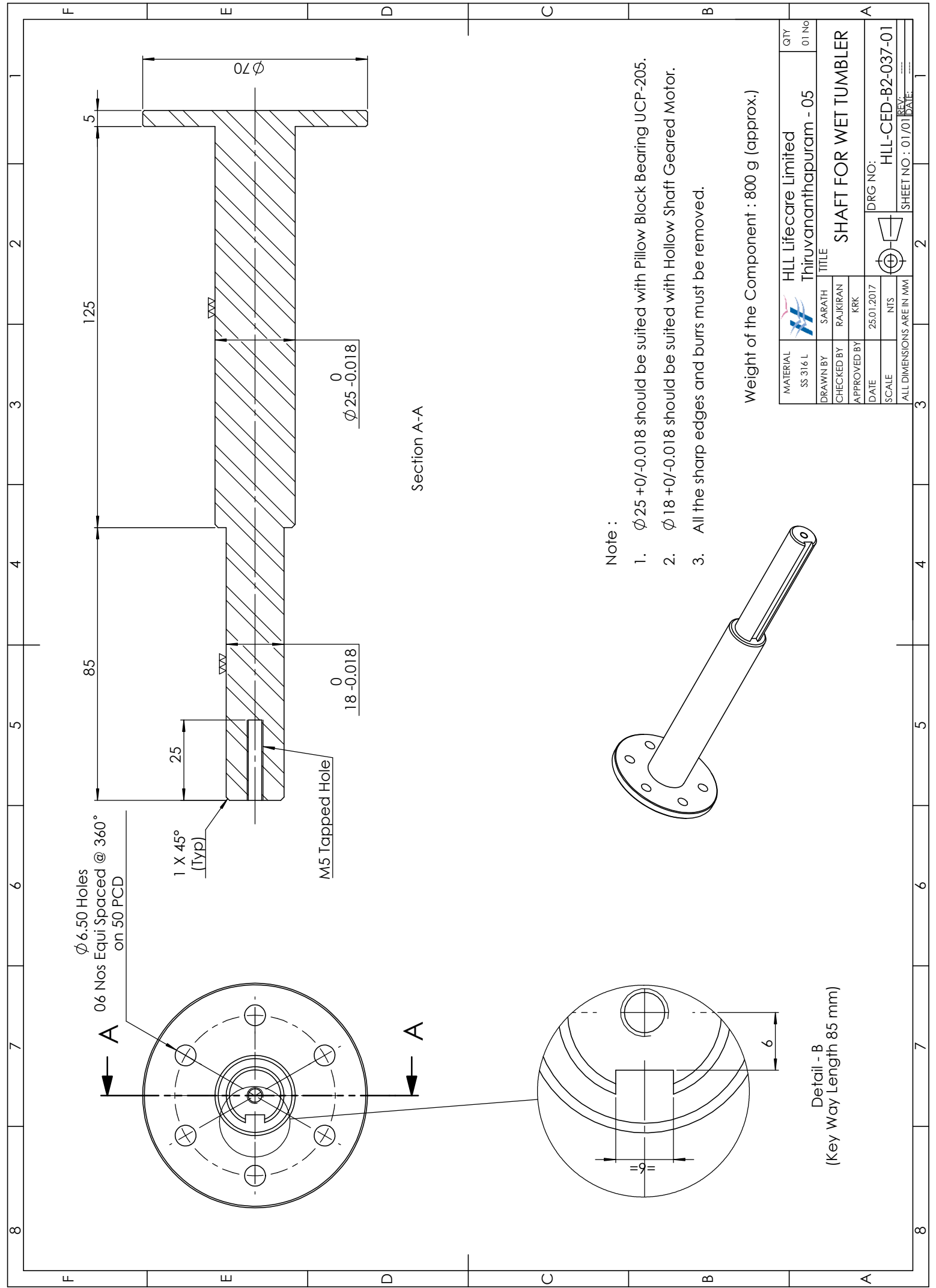
Note :-

1. All welded joints must be Tig Welded.
2. Welding joints must be finished with Grinding / Buffing.
3. Static Balance should be done with whole assembly.
4. Additional Support & Welding is to be provided, if needed.

Sl No	Description	Drawing No	Material	Qty
01	Shaft for Wet Tumbler	HLL-CED-B2-037-01	SS 316 L	01 No
02	Wet Tumbler Base	HLL-CED-B2-037-02	SS 316 L	01 No
03	M6 x 20 mm SHD Bolt	Std Item.	SS 316 L	42 Nos
04	M6 Plain Washer	Std Item.	SS 316 L	84 Nos
05	M6 Spring Washer	Std Item.	SS 316 L	42 Nos
06	M6 Hexagonal Nut	Std Item.	SS 316 L	42 Nos
07	Woven Plain Mesh	HLL-CED-B2-037-03	SS 316 L	03 Nos
08	Setting Bar	HLL-CED-B2-037-04	SS 316 L	06 Nos
09	Angle 25 x 25 x 3 x 1260 mm	HLL-CED-B2-037-05	SS 316 L	06 Nos
10	Inner Ring OD 250 x 25 x 2 mm	HLL-CED-B2-037-06	SS 316 L	01 No
11	Inner Ring OD 214 x 25 x 3 mm	HLL-CED-B2-037-07	SS 316 L	01 No
12	Inner Ring OD 181 x 50 x 3 mm	HLL-CED-B2-037-08	SS 316 L	01 No
13	Outer Ring OD 186 x 30 x 1.6 mm	HLL-CED-B2-037-09	SS 316 L	01 No
14	Roller Guide Ring	HLL-CED-B2-037-10	SS 316 L	01 No



MATERIAL AS SPECIFIED	HLL Lifecare Limited Thiruvananthapuram - 05		QTY	01 No
DRAWN BY	SARATH	TITLE	WET TUMBLER FOR ASW	
CHECKED BY	RAJKIRAN			
APPROVED BY	KRK			
DATE	28.01.2017			
SCALE	NIS			
ALL DIMENSIONS ARE IN MM				
DRG NO: HLL-CED-B2-037-00		SHEET NO : 01/01		



$\phi 6.50$  Holes  
06 Nos Equi Spaced @  $360^\circ$   
on 50 PCD

1 X  $45^\circ$   
(Typ)

M5 Tapped Hole

$18 - 0.018$

$\phi 25 - 0.018$

Section A-A

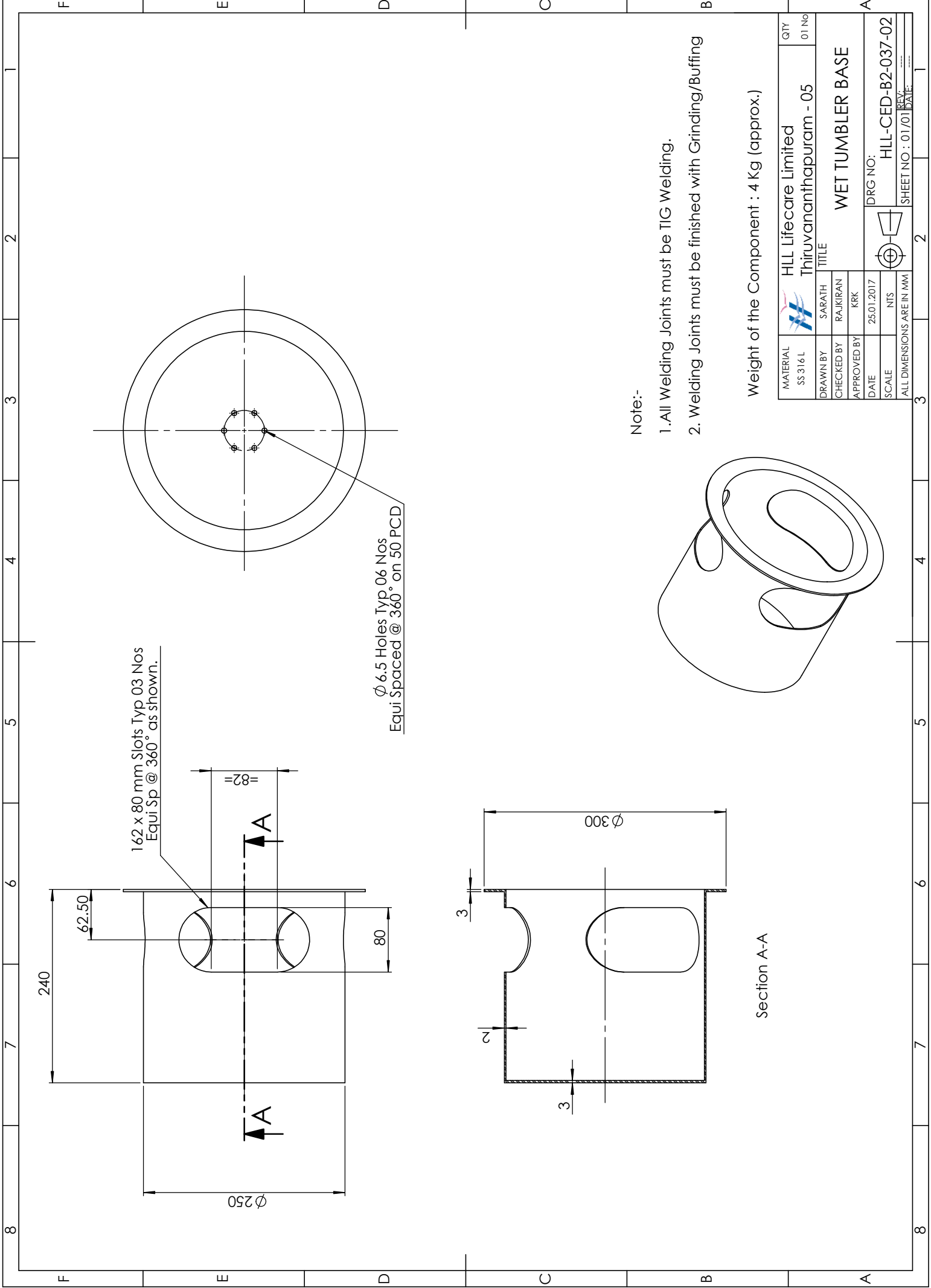
Note :

- $\phi 25 + 0 / - 0.018$  should be suited with Pillow Block Bearing UCP-205.
- $\phi 18 + 0 / - 0.018$  should be suited with Hollow Shaft Geared Motor.
- All the sharp edges and burrs must be removed.

Weight of the Component : 800 g (approx.)

MATERIAL	SS 316 L	HLL Lifecare Limited	QTY	01
DRAWN BY	SARATH	Thiruvananthapuram - 05	NO	01
CHECKED BY	RAJIRAN	TITLE	SHAFT FOR WET TUMBLER	
APPROVED BY	KRK	DRG NO:	HLL-CED-B2-037-01	
DATE	25.01.2017	REV	DATE	
SCALE	NIS	SHEET NO :	01	01
ALL DIMENSIONS ARE IN MM				

Detail - B  
(Key Way Length 85 mm)



162 x 80 mm Slots Typ 03 Nos  
Equi Sp @ 360° as shown.

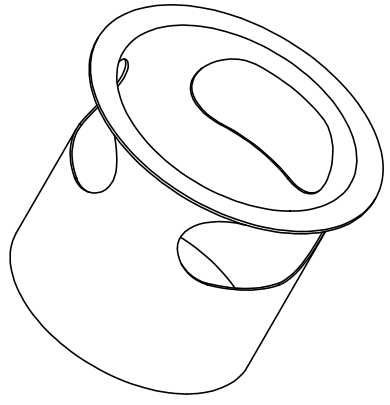
Ø 6.5 Holes Typ 06 Nos  
Equi Spaced @ 360° on 50 PCD

Note:-

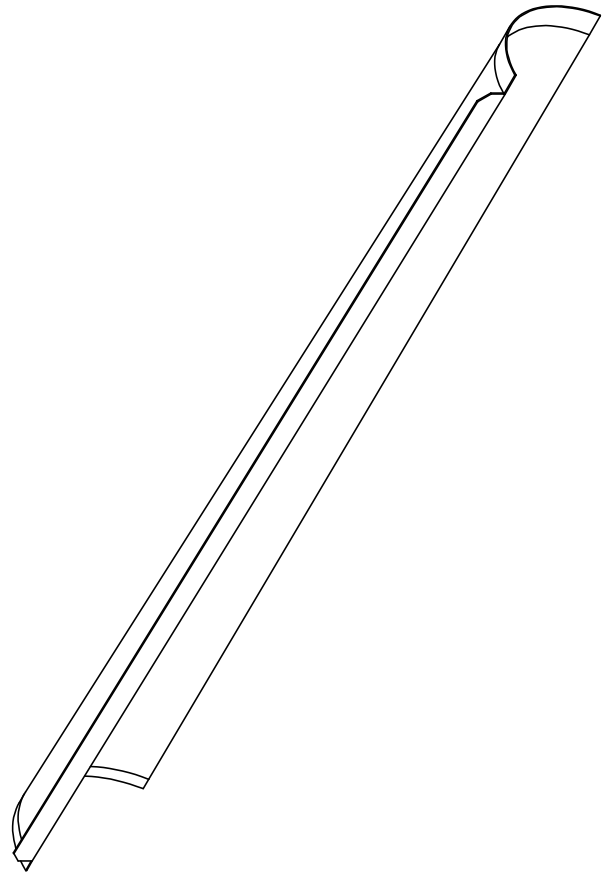
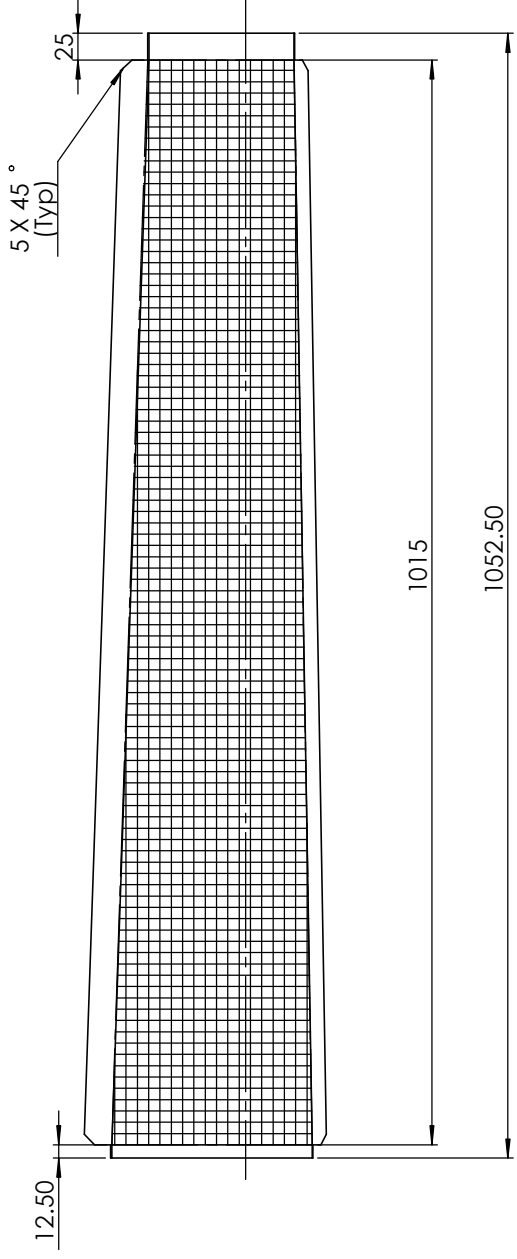
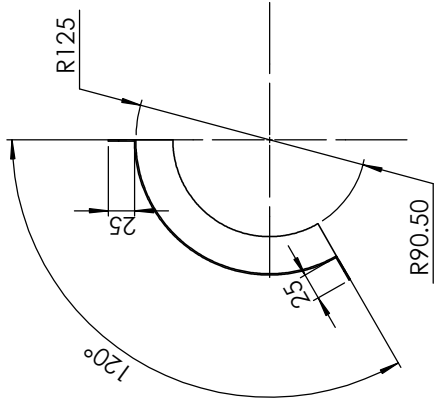
1. All Welding Joints must be TIG Welding.
2. Welding Joints must be finished with Grinding/Buffering

Weight of the Component : 4 Kg (approx.)

MATERIAL	SS 316 L	QTY	01
DRAWN BY	SARATH	NO	01
CHECKED BY	RAJIRAN	HLL Lifecare Limited	
APPROVED BY	KRK	Thiruvananthapuram - 05	
DATE	25.01.2017	TITLE	
SCALE	NIS	WET TUMBLER BASE	
ALL DIMENSIONS ARE IN MM		DRG NO:	HLL-CED-B2-037-02
		REV	DATE
		1	01/01

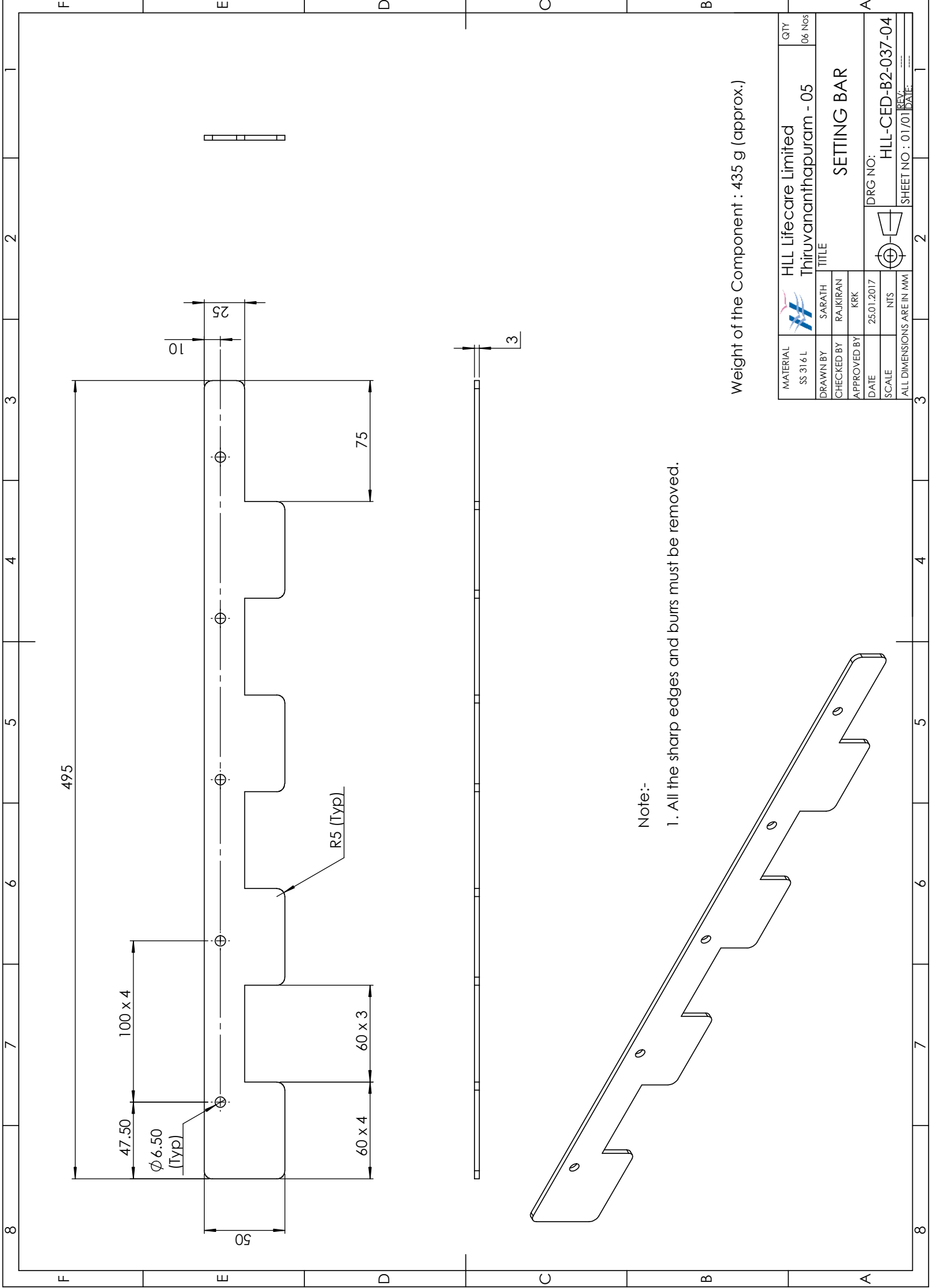


Section A-A



**Material : SS 316 L - Woven Plain Mesh (Plain Weave) Wire Dia 1.219 mm  
4 mesh, Size of Opening-5.1308, % of Opening - 65.3**

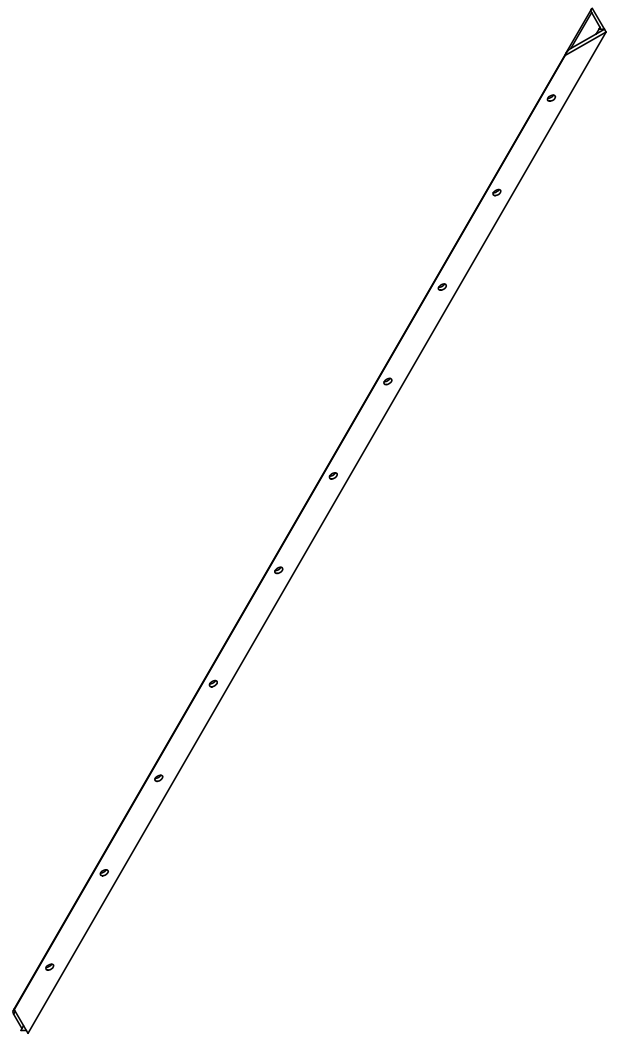
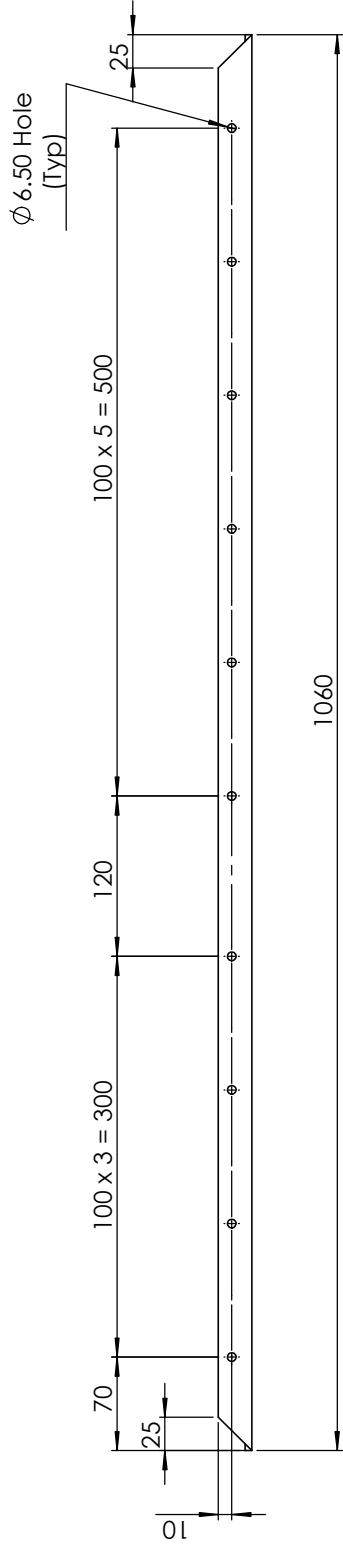
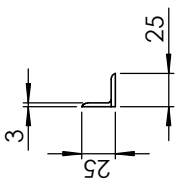
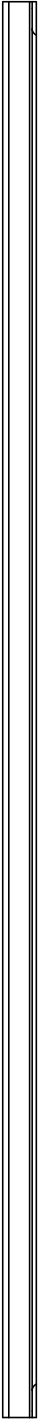
MATERIAL AS SPECIFIED	HLL Lifecare Limited Thiruvananthapuram - 05		QTY 03 Nos
DRAWN BY	SARATH		TITLE
CHECKED BY	RAJIRAN		WOVEN PLAIN MESH
APPROVED BY	KRK		
DATE	25.01.2017		DRG NO:
SCALE	NITS		HLL-CED-B2-037-03
ALL DIMENSIONS ARE IN MM			SHEET NO : 01/01



Weight of the Component : 435 g (approx.)

MATERIAL	SS 316 L	HLL Lifecare Limited		QTY	06 Nos
DRAWN BY	SARATH	Thiruvananthapuram - 05			
CHECKED BY	RAJIRAN	TITLE			
APPROVED BY	KRK	SETTING BAR			
DATE	25.01.2017	DRG NO:		HLL-CED-B2-037-04	
SCALE	NIS	SHEET NO :		01/01	
ALL DIMENSIONS ARE IN MM		REV		DATE	

Note:-  
1. All the sharp edges and burrs must be removed.



Weight of the Component : 1.1 Kg (approx.)

MATERIAL SS 316 L ANGLE	SS 316 L ANGLE	QTY 06 Nos
DRAWN BY SARATH	TITLE HLL Lifecare Limited Thiruvananthapuram - 05	
CHECKED BY RAJIRAN		
APPROVED BY KRK		
DATE 25.01.2017		
SCALE NITS		
ALL DIMENSIONS ARE IN MM		
DRG NO: HLL-CED-B2-037-05		
SHEET NO : 01/01		
REV. DATE		

4

3

2

1

F

F

E

E

D

D

C

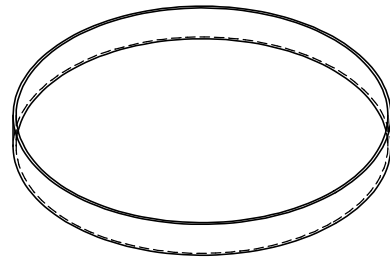
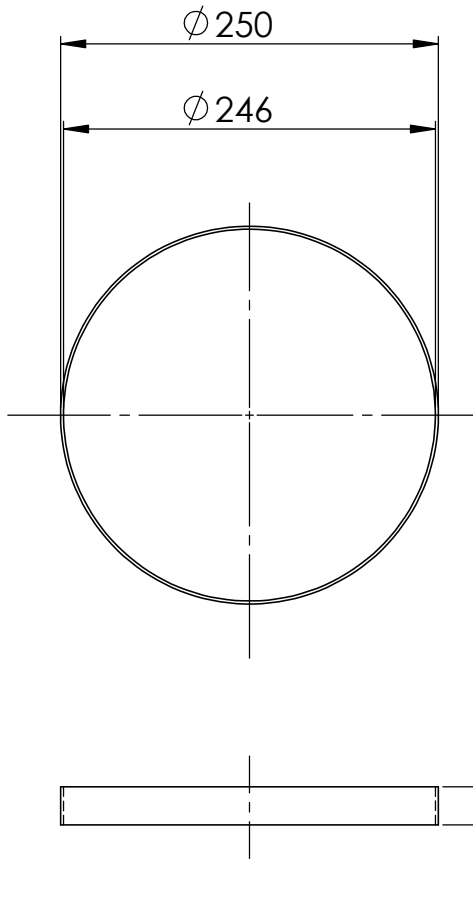
C

B

B

A


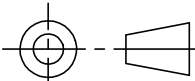
A



Note :-

1. Welding joints must be Tig Welding.
2. Welding Joints must be finished with Grinding /Buffing.

Weight of the Component : 310 g (approx.)

MATERIAL SS 316 L		HLL Lifecare Limited Thiruvananthapuram - 05	QTY 01 No
DRAWN BY SARATH	CHECKED BY RAJKIRAN	APPROVED BY KRK	TITLE INNER RING OD 250 x 25 x 2 mm
DATE 25.01.2017	SCALE NTS	ALL DIMENSIONS ARE IN MM	DRG NO: HLL-CED-B2-037-06
			SHEET NO: 01/01
			REV: DATE:

4

3

2

1

4

3

2

1

F

F

 $\phi 214$  $\phi 208$ 

E

E

D

D

25

C

C

B

B

Note :-

1. Welding joints must be Tig Welding.
2. Welding Joints must be finished with Grinding /Buffing.

Weight of the Component : 400 g (approx.)

MATERIAL  
SS 316 L



HLL Lifecare Limited  
Thiruvananthapuram - 05

QTY  
01 No

DRAWN BY

SARATH

TITLE

CHECKED BY

RAJKIRAN

INNER RING OD 214 x 25 x 3 mm

APPROVED BY

KRK

DATE

25.01.2017

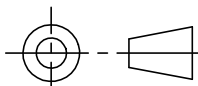
SCALE

NTS

DRG NO:

HLL-CED-B2-037-07

ALL DIMENSIONS ARE IN MM



SHEET NO: 01/01

REV:  
DATE:

4

3

2

1

A

A



4

3

2

1

F

F

E

E

D

D

C

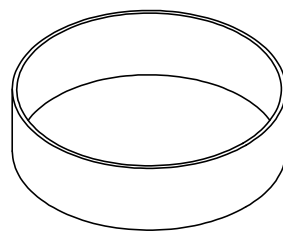
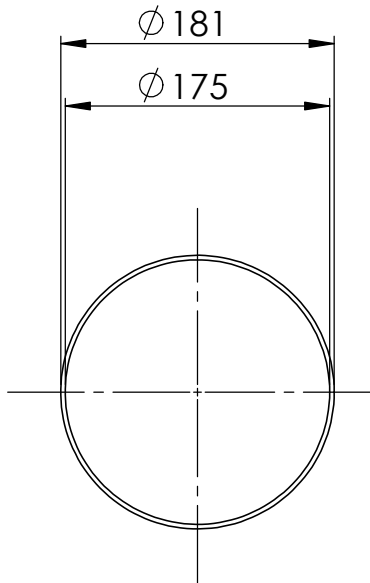
C

B

B

A


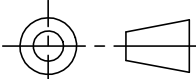
A



Note :-

1. Welding joints must be Tig Welding.
2. Welding Joints must be finished with Grinding /Buffing.

Weight of the Component : 670 g (approx.)

MATERIAL SS 316 L		HLL Lifecare Limited Thiruvananthapuram - 05	QTY 01 No
DRAWN BY SARATH	CHECKED BY RAJKIRAN	APPROVED BY KRK	TITLE INNER RING OD 181 x 50 x 3 mm
DATE 25.01.2017	SCALE NTS	ALL DIMENSIONS ARE IN MM	DRG NO: HLL-CED-B2-037-08
			SHEET NO: 01/01
			REV: DATE:

4

3

2

1

4

3

2

1

F

F

E

E

D

D

C

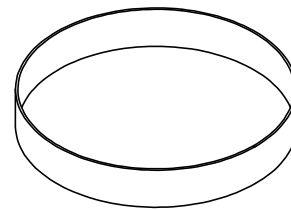
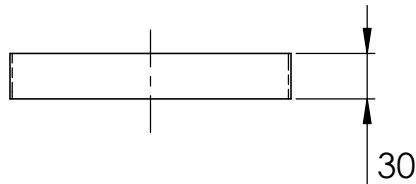
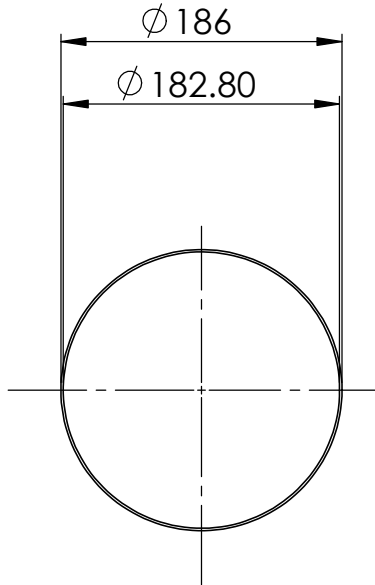
C

B

B

A

A



Note :-

1. Welding joints must be Tig Welding.
2. Welding Joints must be finished with Grinding /Buffing.

Weight of the Component : 220 g (approx.)

MATERIAL  
SS 316 L



HLL Lifecare Limited  
Thiruvananthapuram - 05

QTY  
01 No

DRAWN BY

SARATH

TITLE

OUTER RING OD 186 x 30 x 1.6 mm

CHECKED BY

RAJKIRAN

APPROVED BY

KRK

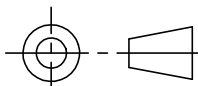
DATE

25.01.2017

SCALE

NTS

ALL DIMENSIONS ARE IN MM



DRG NO:

HLL-CED-B2-037-09

SHEET NO: 01/01

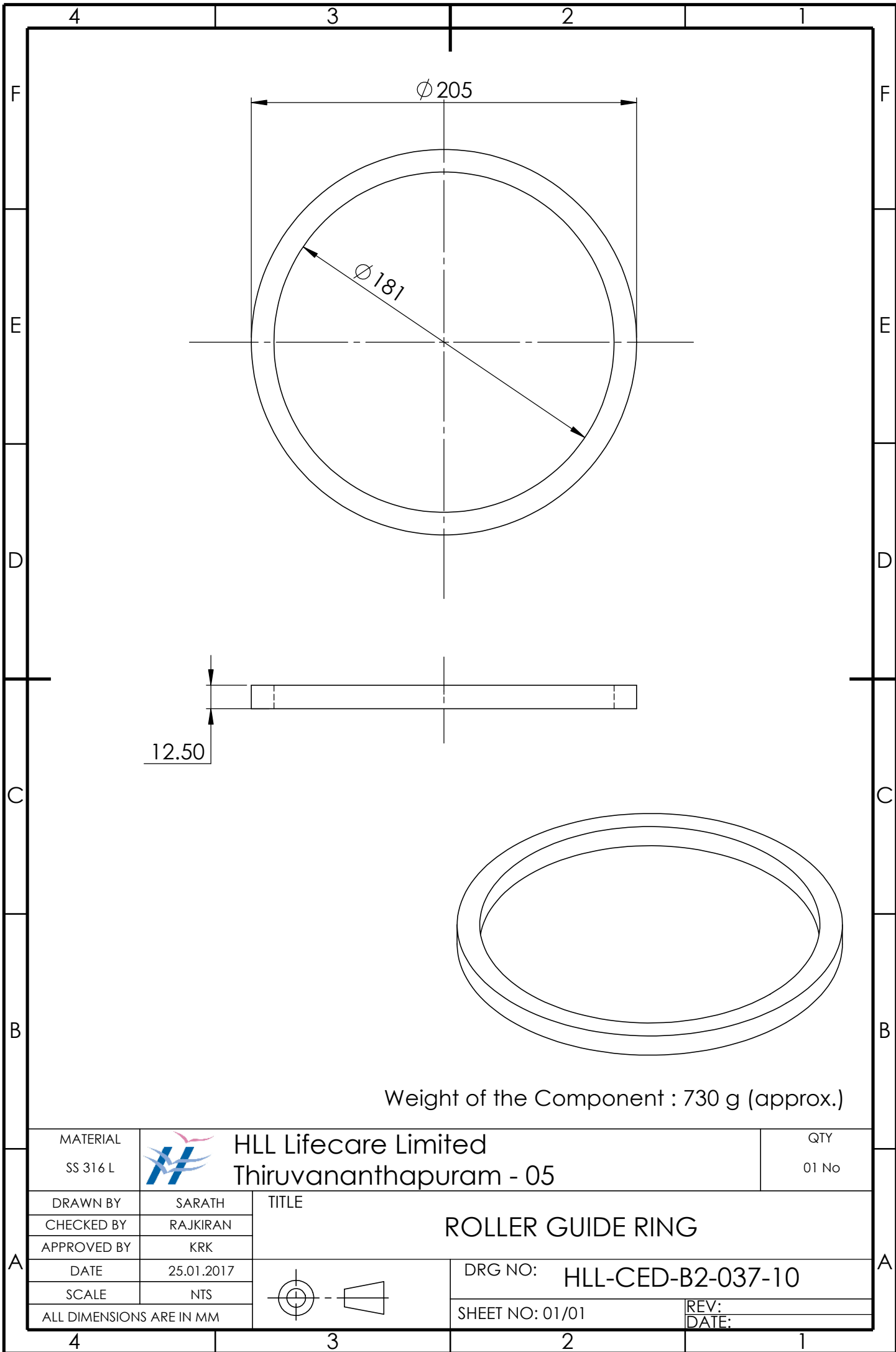
REV:  
DATE:

4


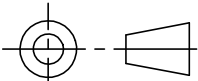
3

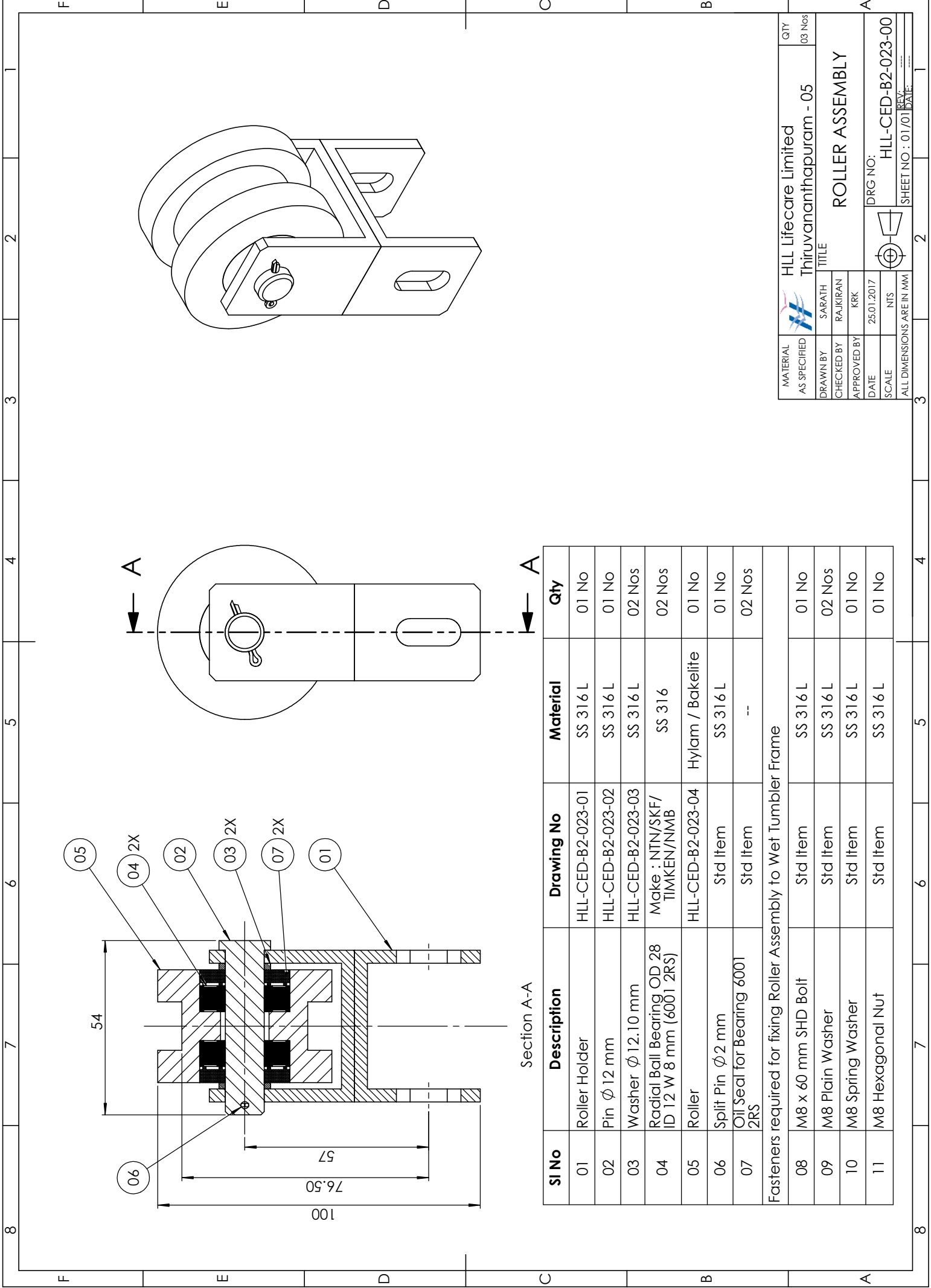
2

1



Weight of the Component : 730 g (approx.)

MATERIAL		HLL Lifecare Limited	QTY
SS 316 L		Thiruvananthapuram - 05	01 No
DRAWN BY	SARATH	<b>ROLLER GUIDE RING</b>	
CHECKED BY	RAJKIRAN		
APPROVED BY	KRK		
DATE	25.01.2017		DRG NO: HLL-CED-B2-037-10
SCALE	NTS		SHEET NO: 01/01
ALL DIMENSIONS ARE IN MM			DATE: _____



Section A-A

SI No	Description	Drawing No	Material	Qty
01	Roller Holder	HLL-CED-B2-023-01	SS 316 L	01 No
02	Pin $\phi$ 12 mm	HLL-CED-B2-023-02	SS 316 L	01 No
03	Washer $\phi$ 12.10 mm	HLL-CED-B2-023-03	SS 316 L	02 Nos
04	Radial Ball Bearing OD 28 ID 12 W 8 mm (6001 2RS)	Make : NTN/SKF/ TIMKEN/NMB	SS 316	02 Nos
05	Roller	HLL-CED-B2-023-04	Hylam / Bakelite	01 No
06	Split Pin $\phi$ 2 mm	Std Item	SS 316 L	01 No
07	Oil Seal for Bearing 6001 2RS	Std Item	--	02 Nos
Fasteners required for fixing Roller Assembly to Wet Tumbler Frame				
08	M8 x 60 mm SHD Bolt	Std Item	SS 316 L	01 No
09	M8 Plain Washer	Std Item	SS 316 L	02 Nos
10	M8 Spring Washer	Std Item	SS 316 L	01 No
11	M8 Hexagonal Nut	Std Item	SS 316 L	01 No

MATERIAL AS SPECIFIED	HLL Lifecare Limited Thiruvananthapuram - 05			QTY 03 Nos
DRAWN BY	SARATH	TITLE		ROLLER ASSEMBLY
CHECKED BY	RAJKIRAN	DATE		
APPROVED BY	KRK	25.01.2017		
SCALE	NTS	DRG NO:	HLL-CED-B2-023-00	
ALL DIMENSIONS ARE IN MM				
SHEET NO : 01/01			REV. DATE	

4

3

2

1

F

F

E

E

D

D

C

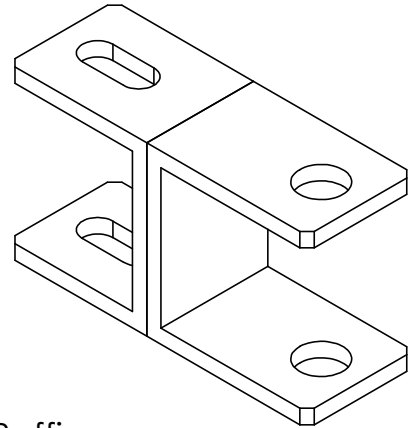
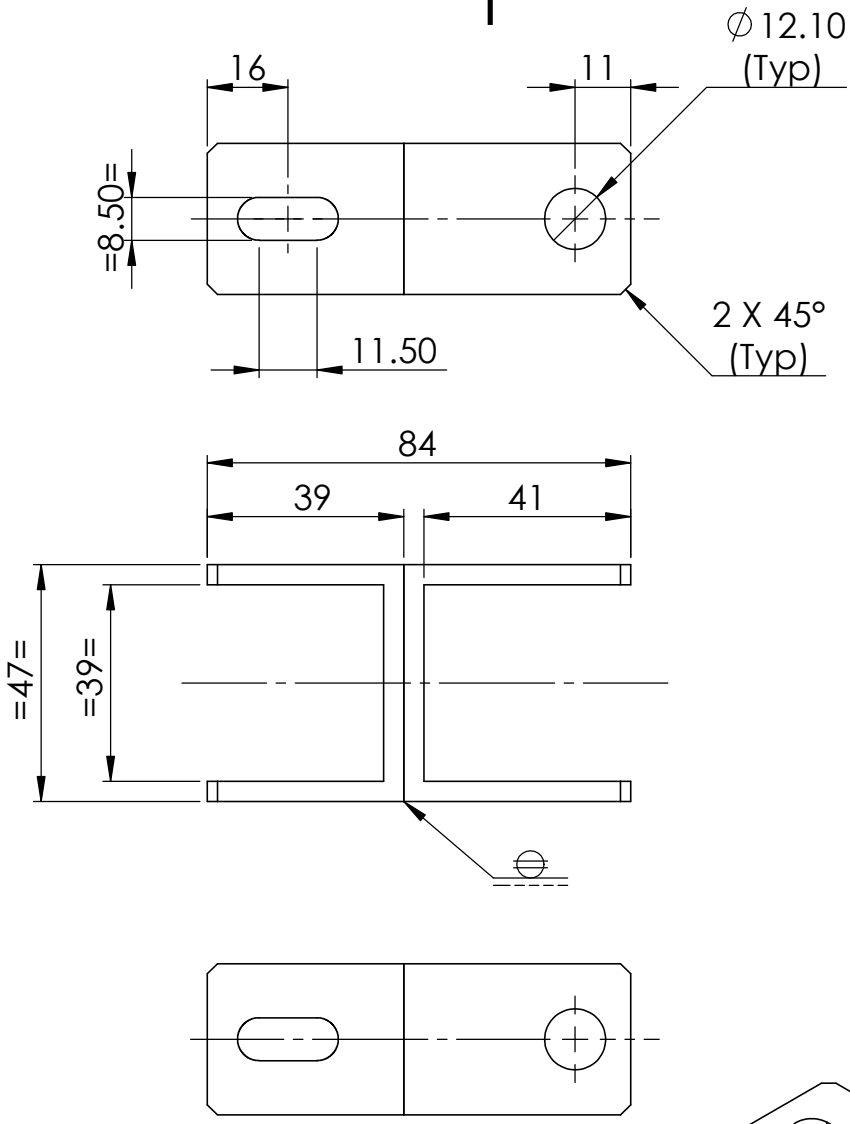
C

B

B

A


A

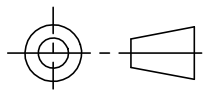


Note:-

1. Welded joints must be Tig Welded.
2. Welding Joint must be finished with Grinding / Buffing
3. All the sharp corners and burrs must be avoided.

Weight of the Component : 215 g (approx.)

MATERIAL SS 316 L		HLL Lifecare Limited Thiruvananthapuram - 05	QTY 03 Nos
DRAWN BY SARATH	CHECKED BY RAJKIRAN	TITLE ROLLER HOLDER	
APPROVED BY KRK	DATE 25.01.2017	DRG NO: HLL-CED-B2-023-01	REV: DATE:
SCALE NTS	ALL DIMENSIONS ARE IN MM	SHEET NO: 01/01	

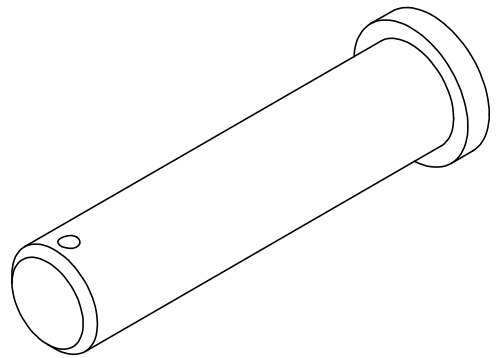
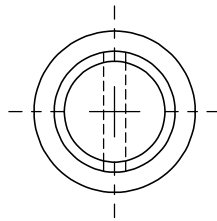
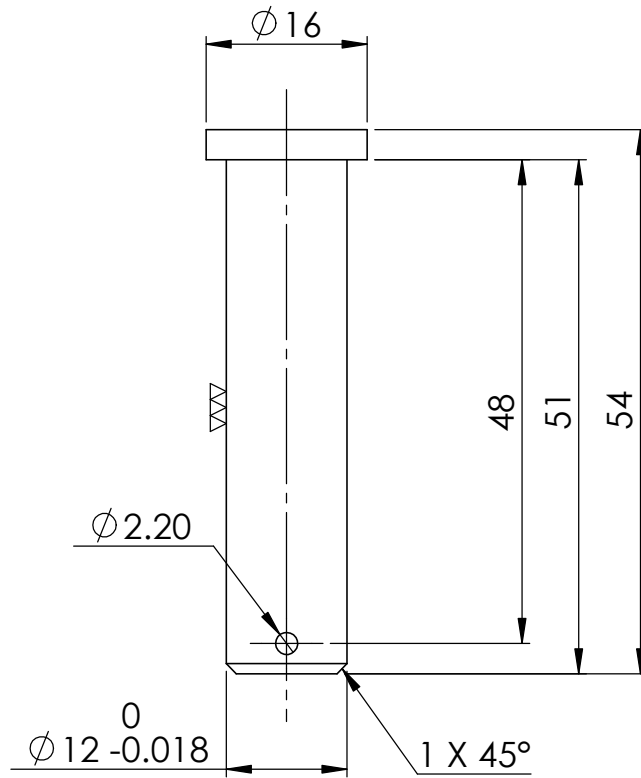


4

3

2


1

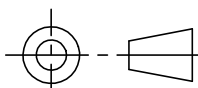


Note:

1.  $\phi 12 +0/-0.018$  Should be suited with Radial Ball Bearing 6001 ZZ ID.
2. All the sharp edges and burrs must be avoided.

Weight of the Component : 50 g (approx.)

MATERIAL SS 316 L		HLL Lifecare Limited Thiruvananthapuram - 05	QTY 03 Nos
DRAWN BY SARATH	CHECKED BY RAJKIRAN	APPROVED BY KRK	TITLE PIN $\phi 12$ mm
DATE 25.01.2017	SCALE NTS	DRG NO: HLL-CED-B2-023-02	REV: DATE:
ALL DIMENSIONS ARE IN MM		SHEET NO: 01/01	



4

3

2

1

F

F

E

E

D

D

C

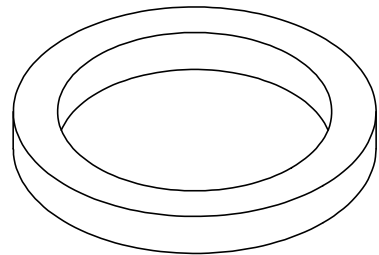
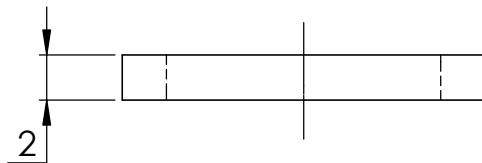
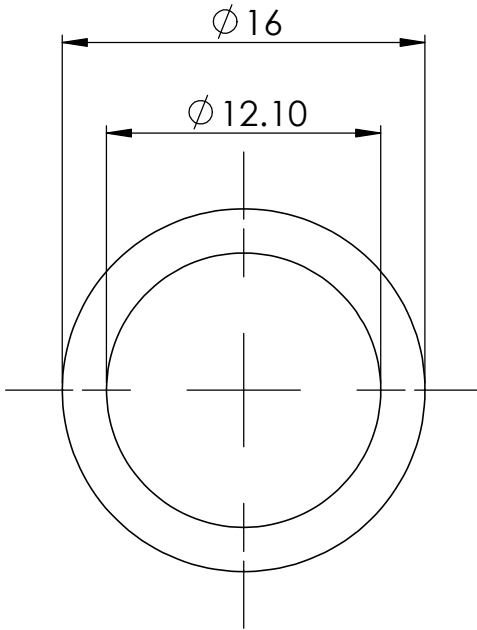
C

B


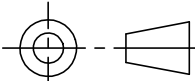
B

A

A



Weight of the Component : 1.5 g (approx.)

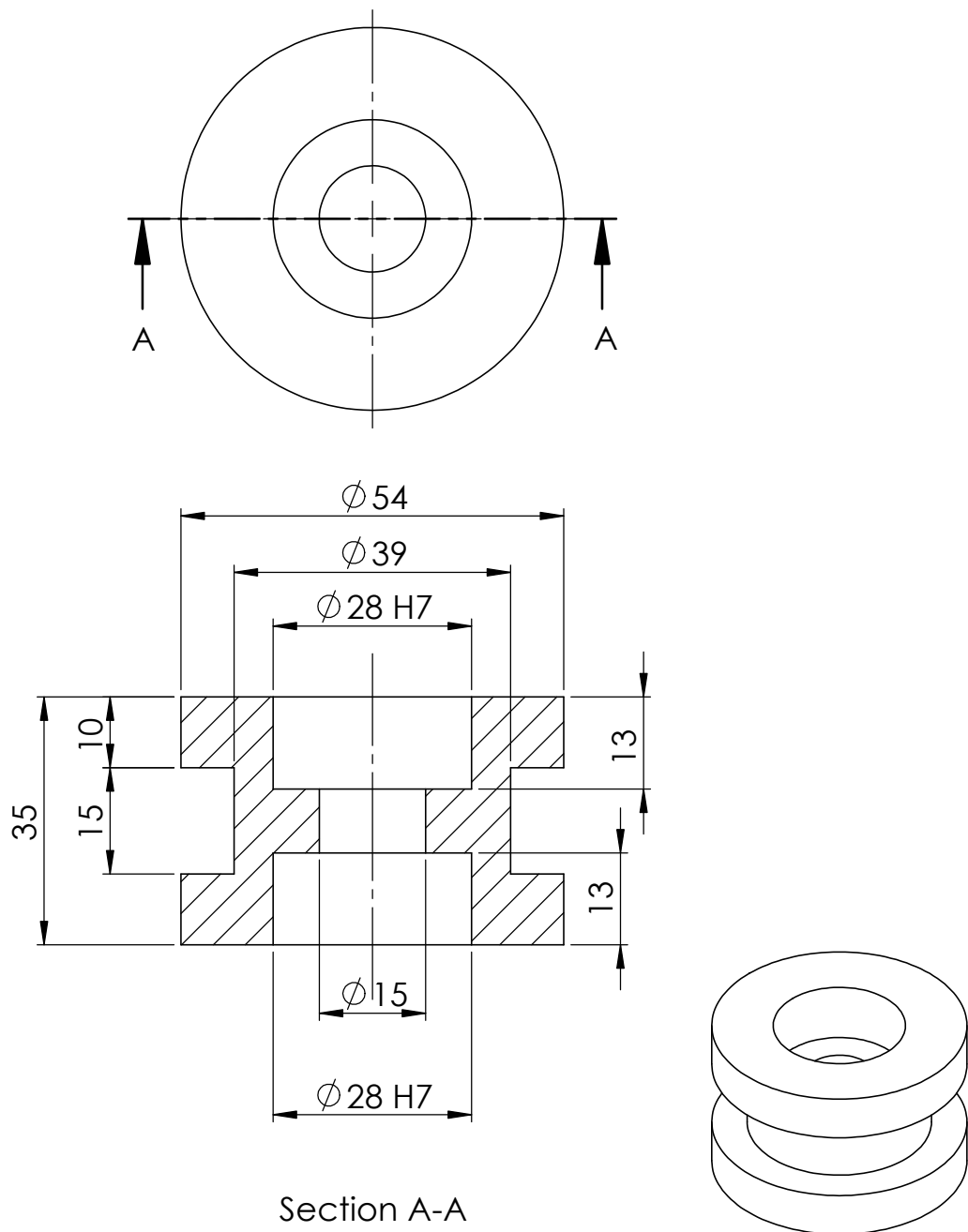
MATERIAL SS 316 L		HLL Lifecare Limited Thiruvananthapuram - 05	QTY 03 Nos
DRAWN BY SARATH	CHECKED BY RAJKIRAN	TITLE WASHER $\phi$ 12.10 mm	DRG NO: HLL-CED-B2-023-03
APPROVED BY KRK	DATE 25.01.2017		
SCALE NTS	ALL DIMENSIONS ARE IN MM		SHEET NO: 01/01

4

3

2


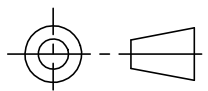
1



Note :

1.  $\phi 28$  H7 Holes must be suited with Radial Ball Bearing 6001 2RS & Oil Seal Outer Dia.
2. All the sharp edges and burrs must be avoided.

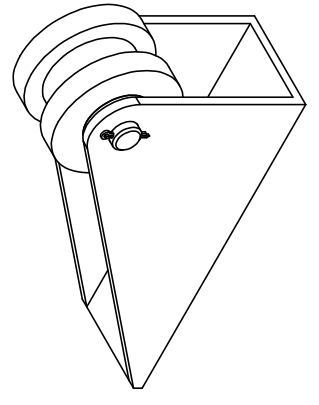
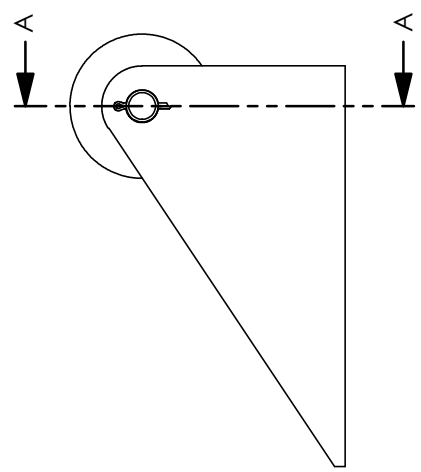
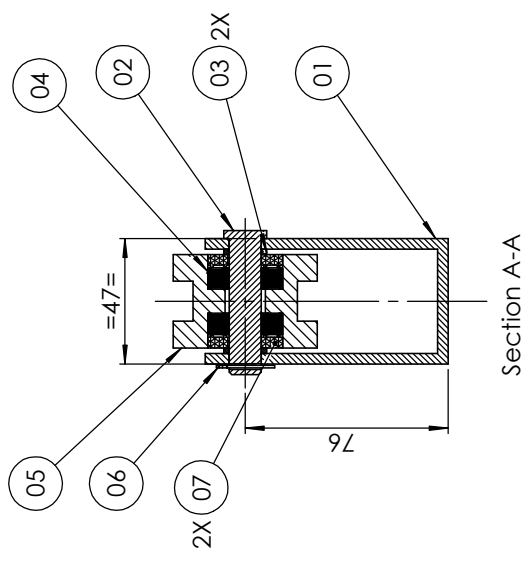
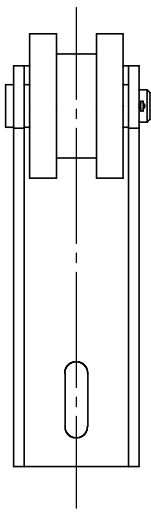
Weight of the Component : 50 g (approx.)

MATERIAL HYLAM / BAKELITE		HLL Lifecare Limited Thiruvananthapuram - 05	QTY 03 Nos
DRAWN BY	SARATH	TITLE <b>ROLLER</b>	
CHECKED BY	RAJKIRAN		
APPROVED BY	KRK		
DATE	25.01.2017		DRG NO: <b>HLL-CED-B2-023-04</b>
SCALE	NTS		SHEET NO: 01/01
ALL DIMENSIONS ARE IN MM			



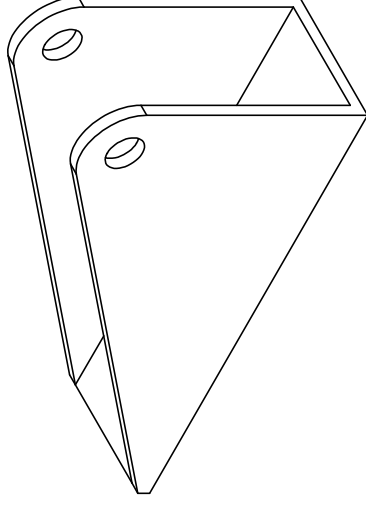
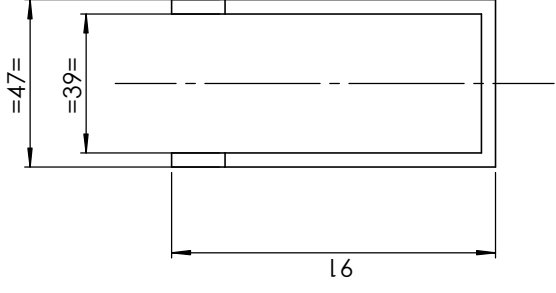
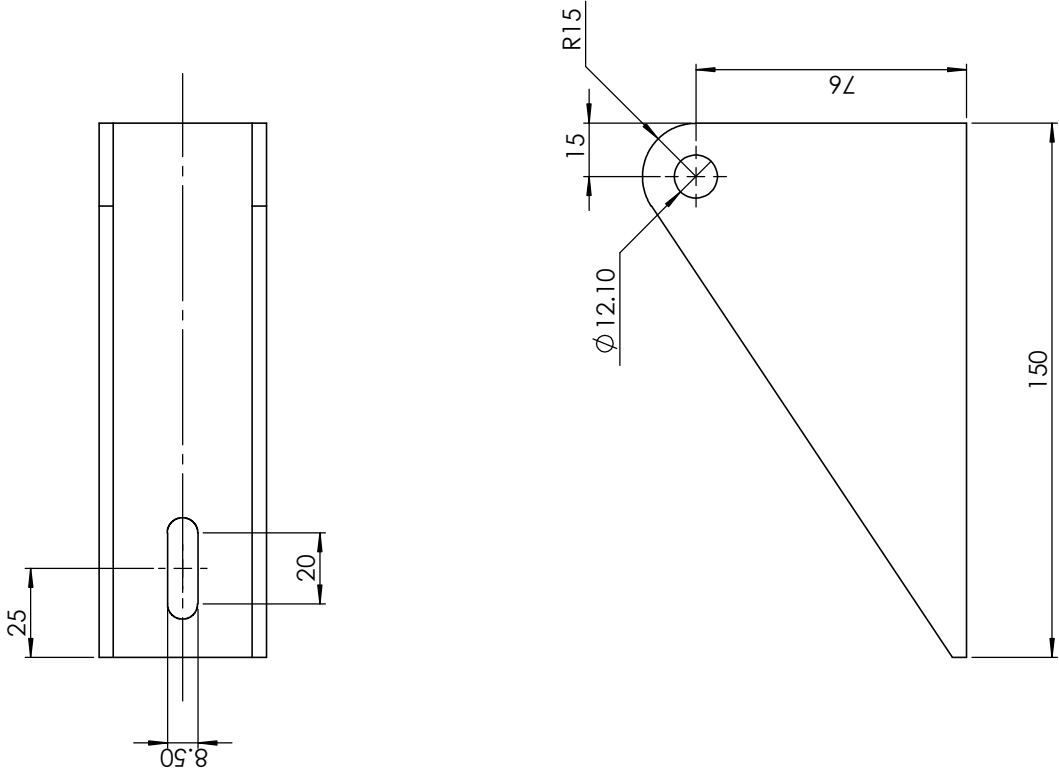
8 7 6 5 4 3 2 1

SI No	Description	Drawing No	Material	Qty
01	Roller Holding Clamp	HLL-CED-B2-026-01	SS 316 L	01 No
02	Pin $\phi$ 12 mm	HLL-CED-B2-026-02	SS 316 L	01 No
03	Washer $\phi$ 12.10 mm	HLL-CED-B2-026-03	SS 316 L	02 Nos
04	Radial Ball Bearing OD 28 ID 12 W 8 mm (6001 2RS)	Make : NTN/SKF/ TIMKEN/NMB	SS 316	02 Nos
05	Roller	HLL-CED-B2-026-04	Hylam/Bakelite	01 No
06	Split Pin $\phi$ 2 mm	Std Item	SS 316 L	01 No
07	Oil Seal for Bearing 6001 2RS	Std Item	---	02 Nos
Fasteners required for Fixing Roller Assembly-I to Wet Tumbler Frame				
08	M8 x 60 mm SHD Bolt	Std Item	SS 316	01 No
09	M8 Plain Washer	Std Item	SS 316	02 Nos
10	M8 Spring Washer	Std Item	SS 316	01 No
11	M8 Hexagonal Nut	Std Item	SS 316	01 No



MATERIAL AS SPECIFIED	HLL Lifecare Limited Thiruvananthapuram - 05			QTY 04 Nos
DRAWN BY	SARATH			TITLE
CHECKED BY	RAJIRAN			ROLLER ASSEMBLY - I
APPROVED BY	KRK			
DATE	26.01.2017			DRG NO:
SCALE	NTS			HLL-CED-B2-026-00
ALL DIMENSIONS ARE IN MM				REV. DATE
				01/01

F E D C B A

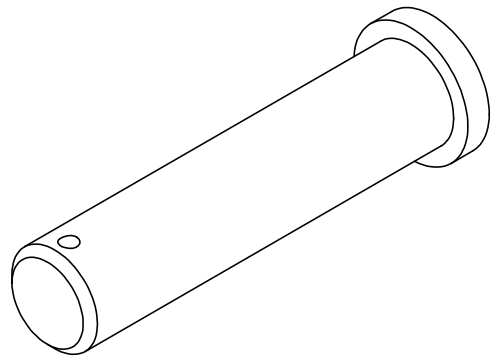
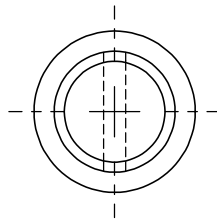
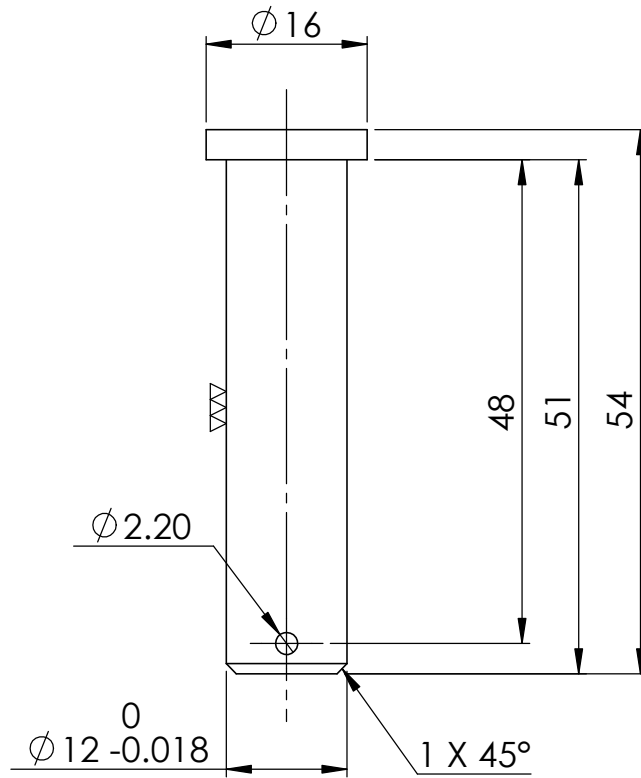


Weight of the Component : 680 g (approx.)

Note:-

1. All the sharp edges and burrs must be avoided.


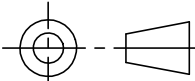
MATERIAL	SS 316 L	QTY	04 Nos
DRAWN BY	SARATH	HLL Lifecare Limited Thiruvananthapuram - 05	
CHECKED BY	RAJIRAN	TITLE	
APPROVED BY	KRK	ROLLER HOLDING CLAMP	
DATE	25.01.2017	DRG NO:	HLL-CED-B2-026-01
SCALE	NIS	SHEET NO : 01/01	
ALL DIMENSIONS ARE IN MM			



Note:

1.  $\phi 12 +0/-0.018$  Should be suited with Radial Ball Bearing 6001 ZZ ID.
2. All the sharp edges and burrs must be avoided.

Weight of the Component : 50 g (approx.)

MATERIAL SS 316 L		HLL Lifecare Limited Thiruvananthapuram - 05	QTY 03 Nos
DRAWN BY SARATH	CHECKED BY RAJKIRAN	TITLE PIN $\phi$ 12 mm	
APPROVED BY KRK	DATE 25.01.2017		
SCALE NTS		DRG NO: HLL-CED-B2-026-02	REV: DATE:
ALL DIMENSIONS ARE IN MM		SHEET NO: 01/01	

4

3

2

1

F

F

E

E

D

D

C

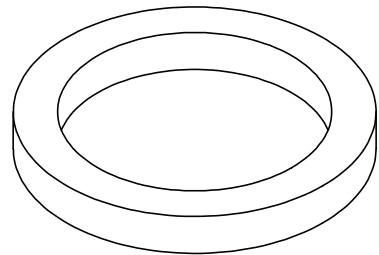
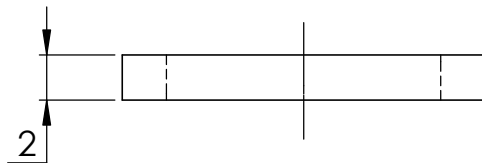
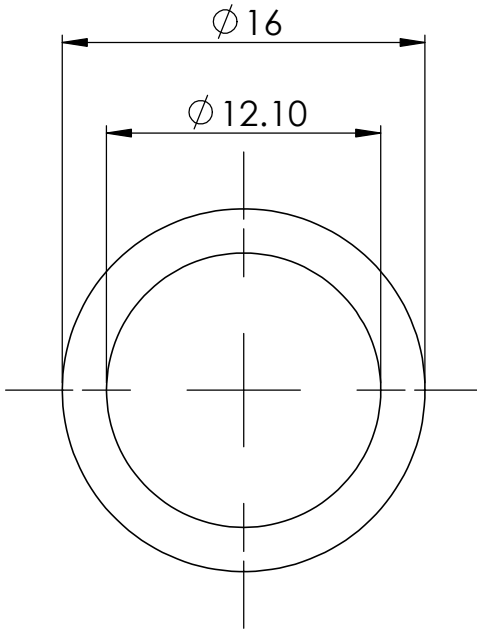
C

B

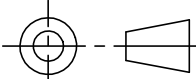
B

A

A



Weight of the Component : 1.5 g (approx.)

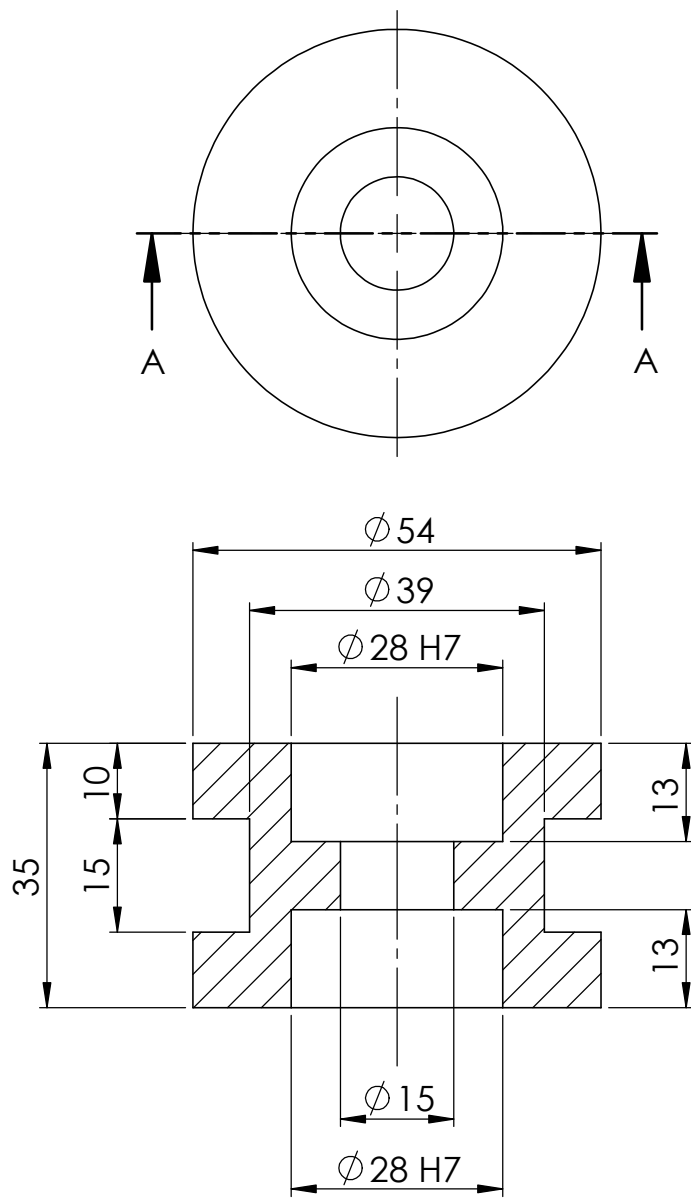
MATERIAL SS 316 L		HLL Lifecare Limited Thiruvananthapuram - 05	QTY 03 Nos
DRAWN BY SARATH	CHECKED BY RAJKIRAN	TITLE WASHER $\phi 12.10$ mm	DRG NO: HLL-CED-B2-026-03
APPROVED BY KRK	DATE 25.01.2017		
SCALE NTS	ALL DIMENSIONS ARE IN MM		SHEET NO: 01/01

4

3

2

1


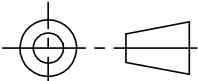


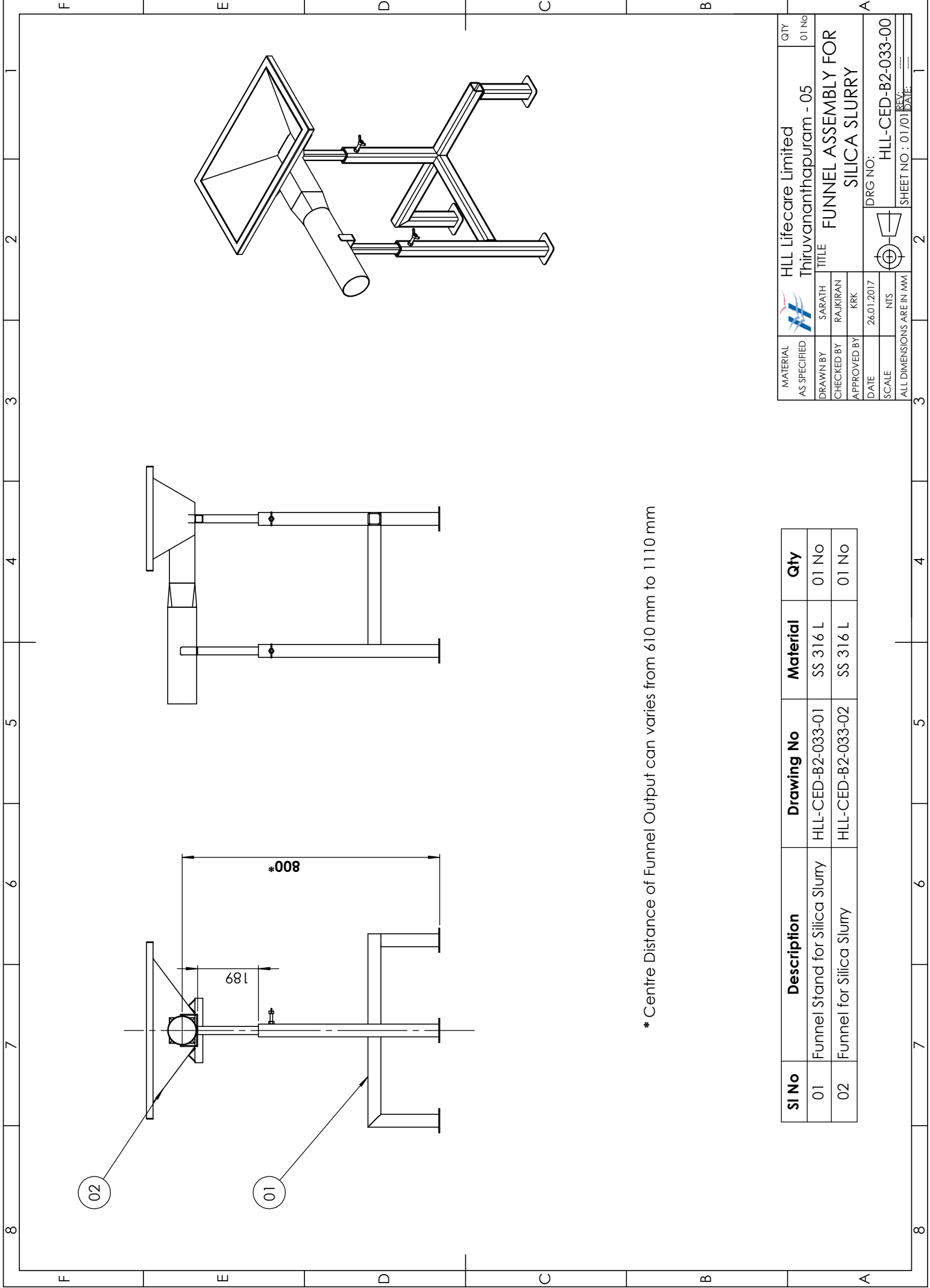
Section A-A

Note :

1.  $\phi 28$  H7 Holes must be suited with Radial Ball Bearing 6001 2RS and Oil Seal Outer Dia.
2. All the sharp edges and burrs must be avoided.

Weight of the Component : 325 g (approx.)

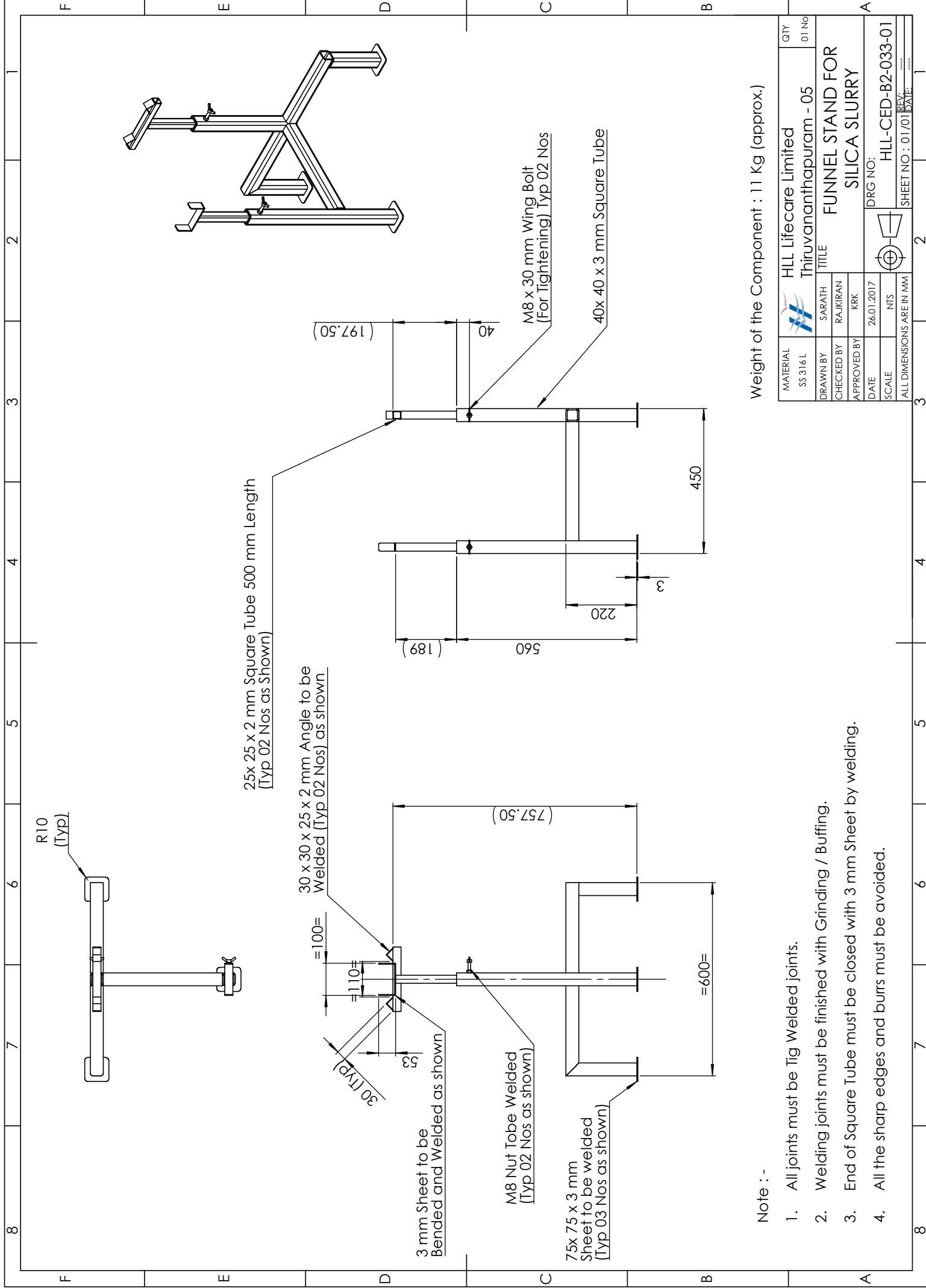
MATERIAL HYLAM / BAKELITE		HLL Lifecare Limited Thiruvananthapuram - 05	QTY 03 Nos
DRAWN BY	SARATH	TITLE <b>ROLLER</b>	
CHECKED BY	RAJKIRAN		
APPROVED BY	KRK		
DATE	25.01.2017	DRG NO:	HLL-CED-B2-026-04
SCALE	NTS	SHEET NO: 01/01	REV: DATE:
ALL DIMENSIONS ARE IN MM			



\* Centre Distance of Funnel Output can varies from 610 mm to 1110 mm

SI No	Description	Drawing No	Material	Qty
01	Funnel Stand for Silica Slurry	HLL-CED-B2-033-01	SS 316 L	01 No
02	Funnel for Silica Slurry	HLL-CED-B2-033-02	SS 316 L	01 No

MATERIAL AS SPECIFIED	HLL Lifecare Limited Thiruvananthapuram - 05		QTY 01 No
DRAWN BY	SARATH	TITLE	FUNNEL ASSEMBLY FOR SILICA SLURRY
CHECKED BY	RAJIRAN		
APPROVED BY	KRK		
DATE	26.01.2017		
SCALE	NIS		
ALL DIMENSIONS ARE IN MM		DRG NO:	HLL-CED-B2-033-00
		REV	DATE
		1	01/01

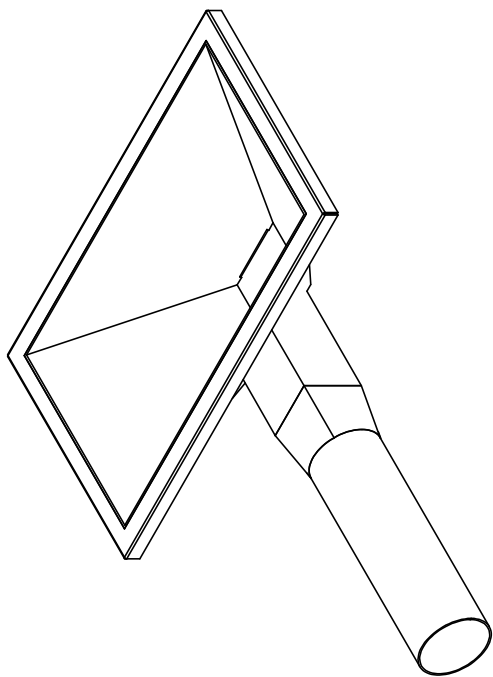


Weight of the Component : 11 Kg (approx.)

MATERIAL	SS 316 L	HLL Lifecare Limited	QTY	01
DRAWN BY	SARATH	Thiruvananthapuram - 05	NO	01
CHECKED BY	RAJIRAN	TITLE	FUNNEL STAND FOR SILICA SLURRY	
APPROVED BY	KRK	DRG NO:	HLL-CED-B2-033-01	
DATE	26.01.2017	REV.	DATE	
SCALE	NIS	SHEET NO :	01	01
ALL DIMENSIONS ARE IN MM				

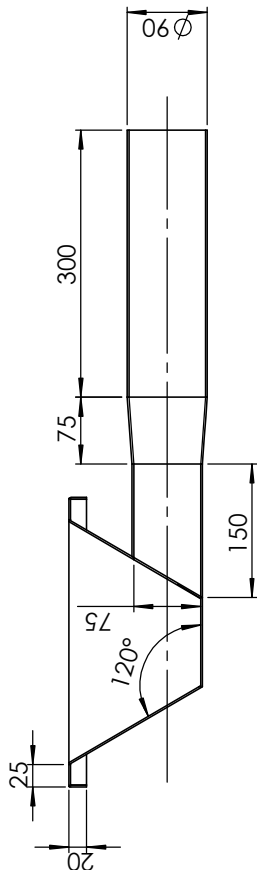
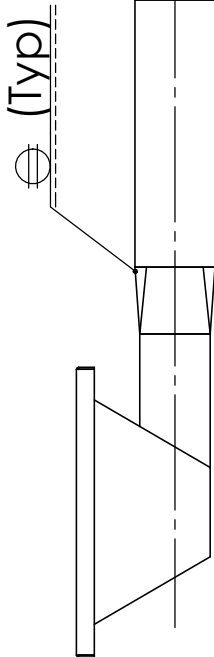
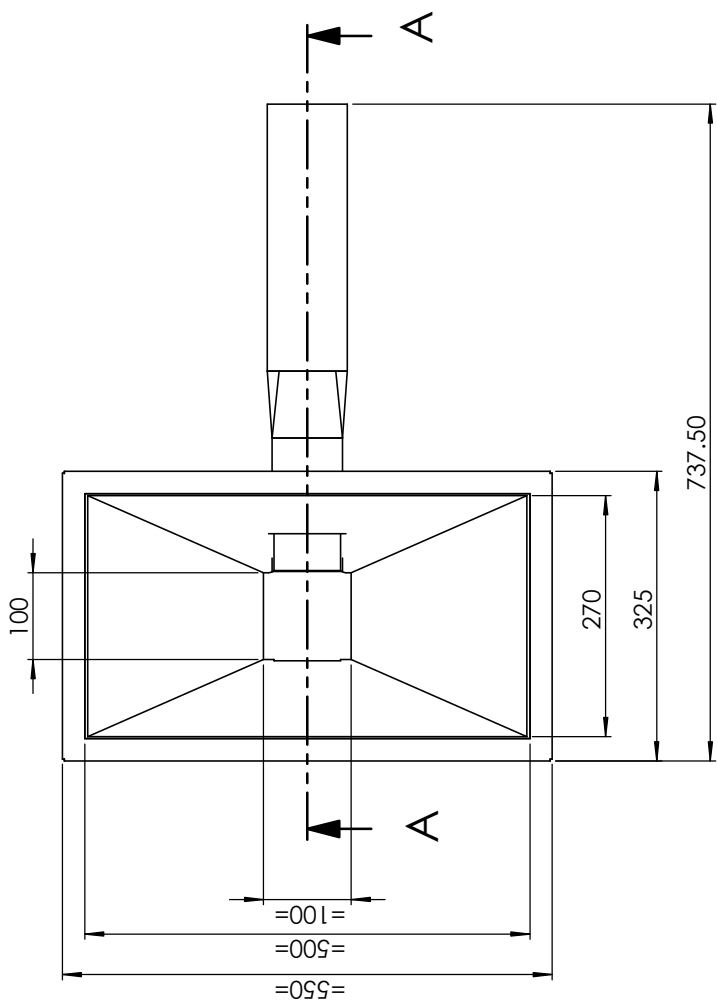
Note :-

1. All joints must be Tig Welded joints.
2. Welding joints must be finished with Grinding / Buffing.
3. End of Square Tube must be closed with 3 mm Sheet by welding.
4. All the sharp edges and burrs must be avoided.

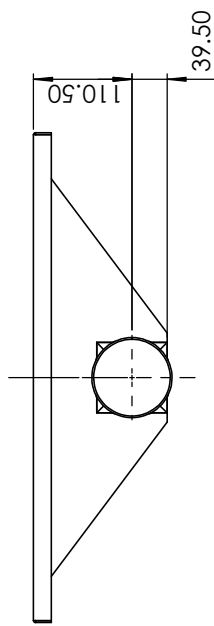


Note :-

1. All the joints must be Tig Welded.
2. Welded joints must be finished with Grinding / Buffing.
3. All the sharp edges and burrs must be avoided.



Section A-A



Weight of the Component : 8 Kg (approx.)

MATERIAL	SS 316 L	QTY	01
14 SWG SHEET		NO	
DRAWN BY	SARATH	TITLE	
CHECKED BY	RAJIRAN	HLL Lifecare Limited	
APPROVED BY	KRK	Thiruvananthapuram - 05	
DATE	26.01.2017	FUNNEL FOR SILICA SLURRY	
SCALE	NIS	DRG NO:	
ALL DIMENSIONS ARE IN MM		HLL-CED-B2-033-02	
		SHEET NO : 01/01	



4

3

2

1

F

F

E

E

D

D

C

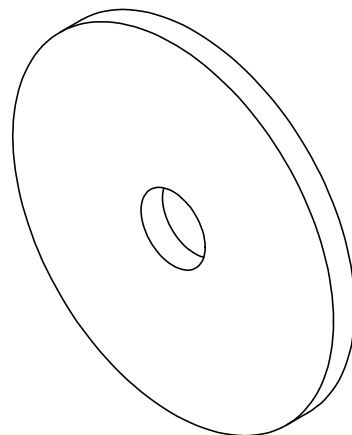
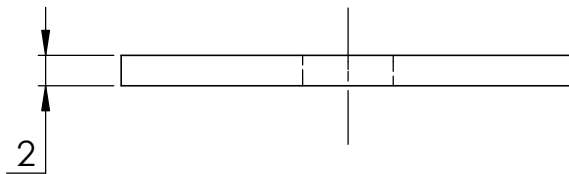
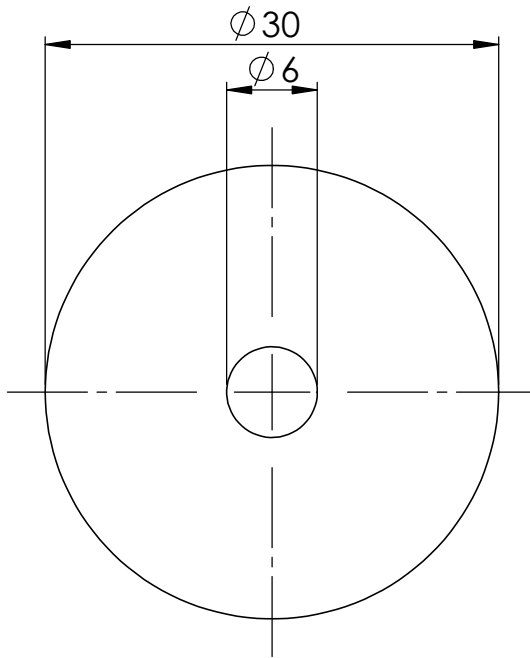
C

B


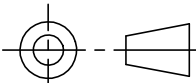
B

A

A



Weight of the Component : 10 g (approx.)

MATERIAL SS 316 L		HLL Lifecare Limited Thiruvananthapuram - 05	QTY 02 Nos
DRAWN BY SARATH	CHECKED BY RAJKIRAN	TITLE WASHER FOR GEAR MOTOR	DRG NO: HLL-CED-B2-031-00
APPROVED BY KRK	DATE 26.01.2017		
SCALE NTS	ALL DIMENSIONS ARE IN MM		SHEET NO: 01/01

4

3

2

1

4

3

2

1

F

F

E

E

D

D

C

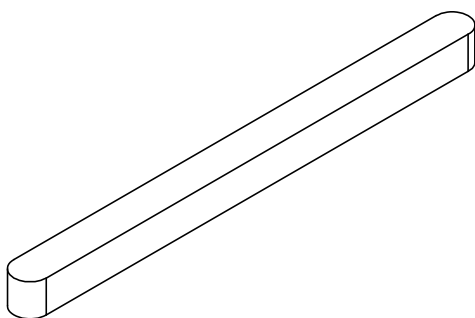
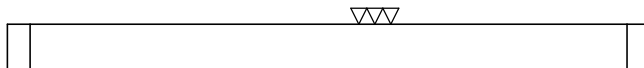
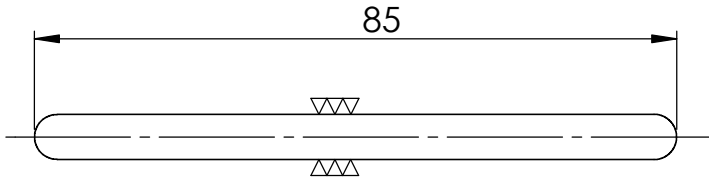
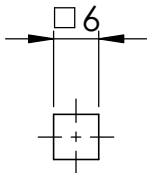
C

B


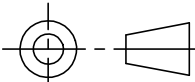
B

A

A



Weight of the Component : 25 g (approx.)

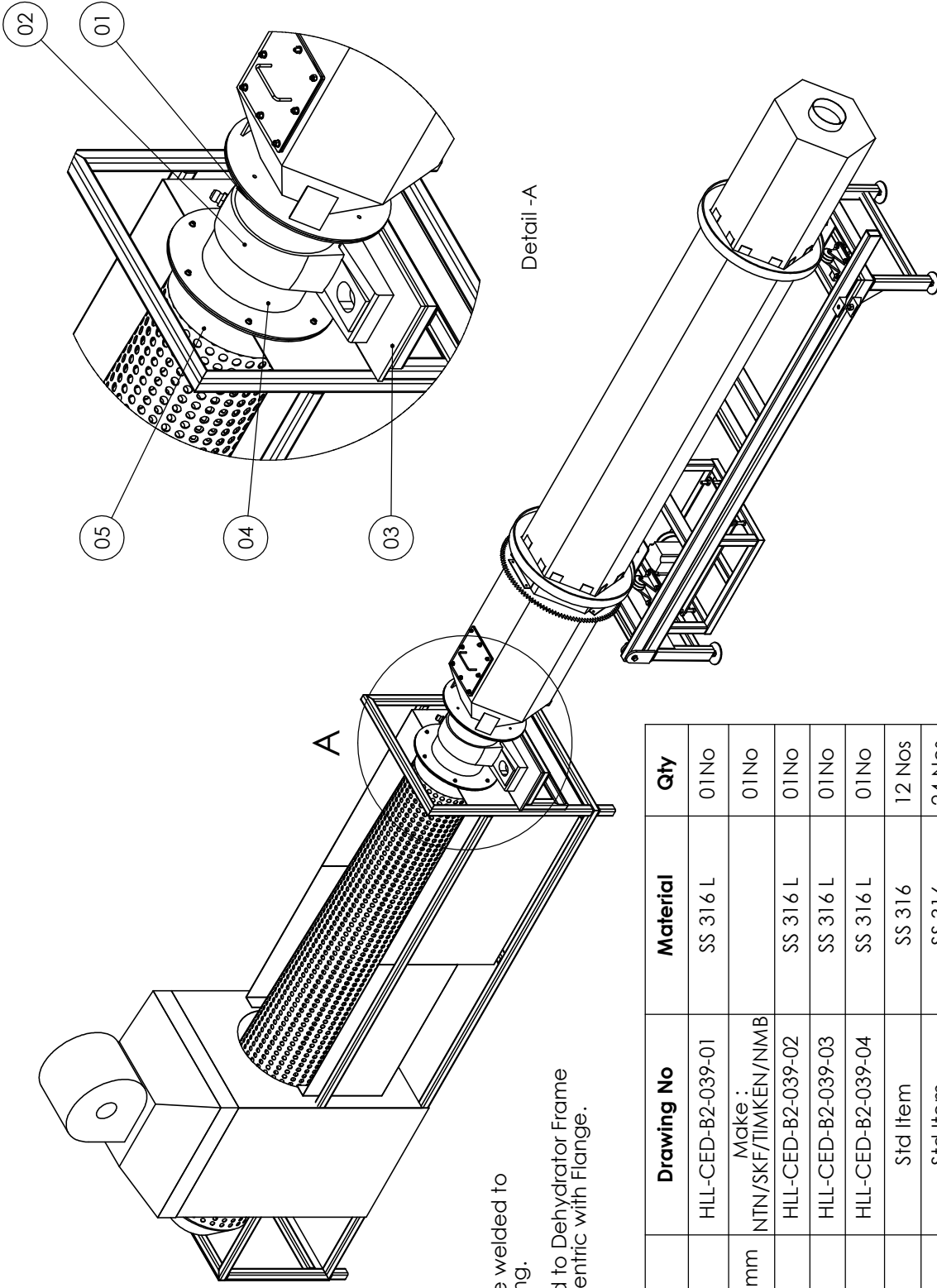
MATERIAL SS 316 L		HLL Lifecare Limited Thiruvananthapuram - 05	QTY 02 Nos
DRAWN BY SARATH	CHECKED BY RAJKIRAN	TITLE PARALLEL KEY 6 x 6 x 85 mm	
APPROVED BY KRK	DATE 26.01.2017	DRG NO: HLL-CED-B2-032-00	REV:
SCALE NTS		SHEET NO: 01/01	DATE:
ALL DIMENSIONS ARE IN MM			

4

3

2

1

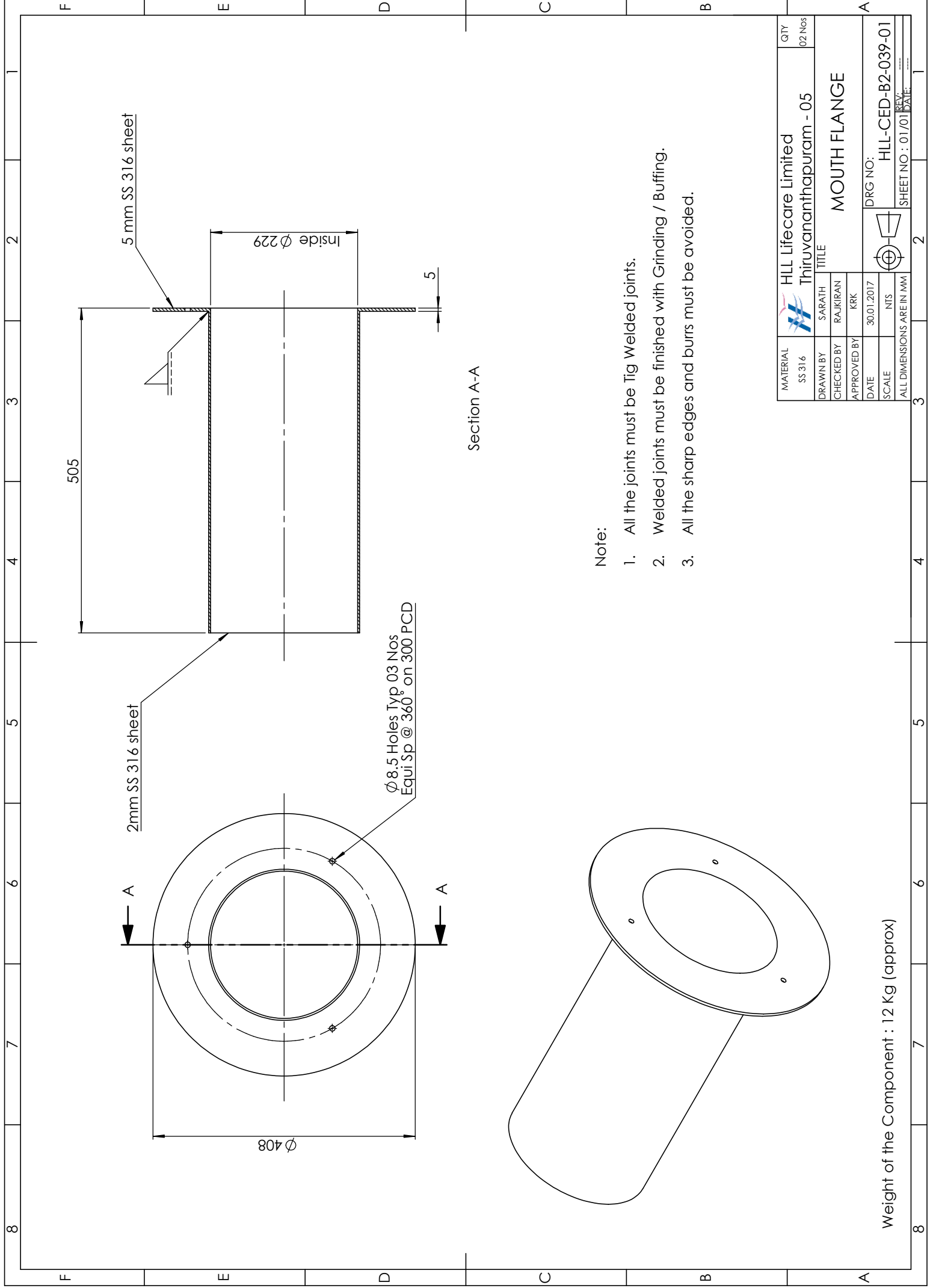


Outer Ring for Dehydrator is to be welded to Dehydrator Tumbler by Tig Welding.

Stand for Bearing is to be Welded to Dehydrator Frame by keeping bearing centre concentric with Flange.

SI No	Description	Drawing No	Material	Qty
01	Mouth Flange	HLL-CED-B2-039-01	SS 316 L	01No
02	Pillow-Block Bearing ID 250 mm	Make : NTN/SKF/TIMKEN/NMB		01No
03	Stand for Bearing	HLL-CED-B2-039-02	SS 316 L	01No
04	Flange for Bearing	HLL-CED-B2-039-03	SS 316 L	01No
05	Outer Ring for Dehydrator	HLL-CED-B2-039-04	SS 316 L	01No
06	M6 x 20 mm SHD Bolt	Std Item	SS 316	12 Nos
07	M6 Plain Washer	Std Item	SS 316	24 Nos
08	M6 Spring Washer	Std Item	SS 316	12 Nos
09	M6 Hexagonal Nut	Std Item	SS 316	12 Nos
10	M16 x 100 mm SHD Bolt	Std Item	SS 316	02 Nos
11	M16 Plain Washer	Std Item	SS 316	04 Nos
12	M16 Spring Washer	Std Item	SS 316	02 Nos
13	M16 Hexagonal Nut	Std Item	SS 316	02 Nos

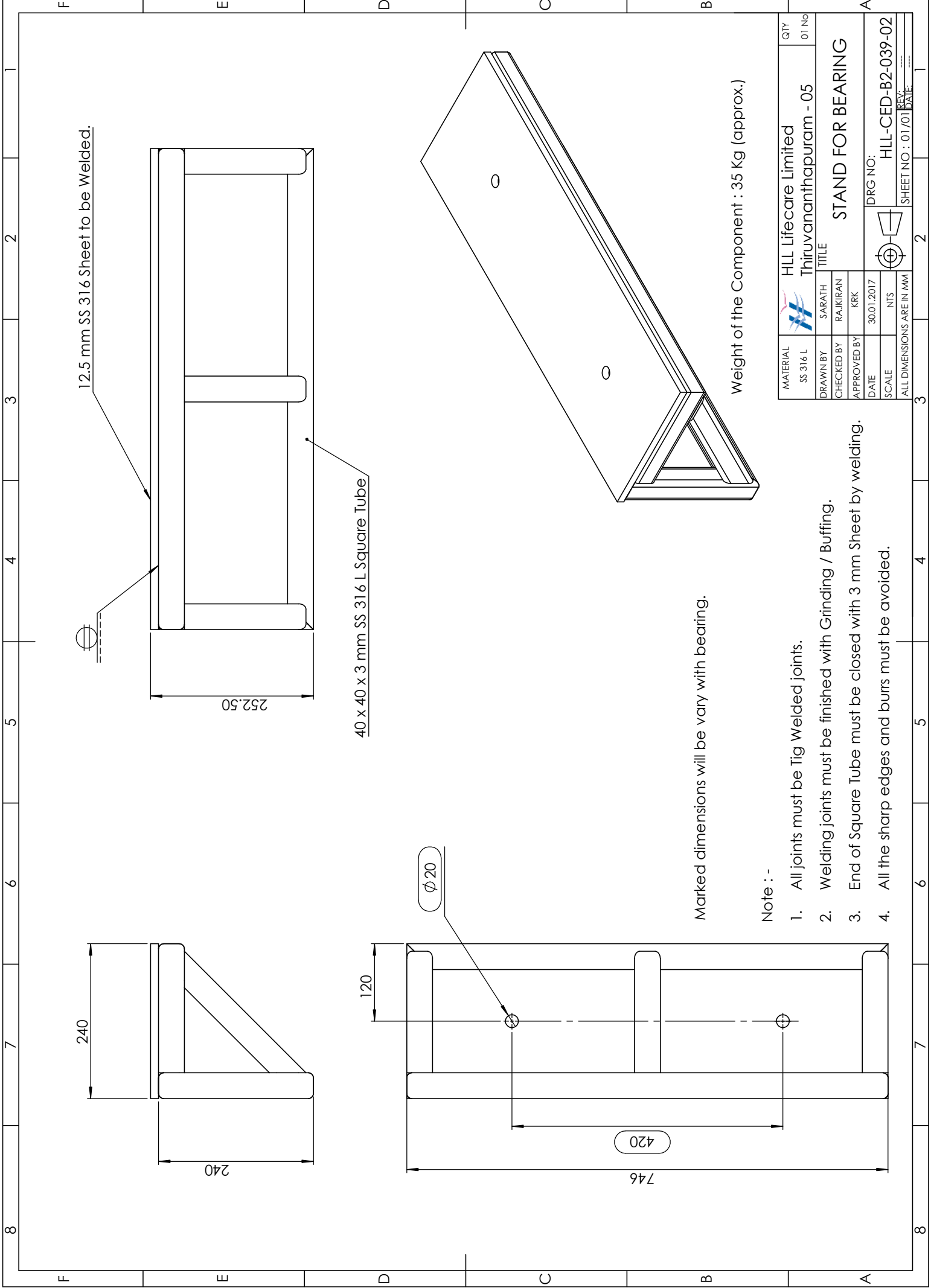
MATERIAL AS SPECIFIED	HLL Lifecare Limited Thiruvananthapuram - 05		QTY	02 Nos
DRAWN BY	SARATH	TITLE	BEARING ASSEMBLY FOR DEHYDRATOR	
CHECKED BY	RAJIRAN	APPROVED BY	DRG NO: HLL-CED-B2-039-00	
DATE	30.01.2017	SCALE	SHEET NO : 01/01 REV. DATE	
ALL DIMENSIONS ARE IN MM			2	



MATERIAL	SS 316	HLL Lifecare Limited		QTY	02 Nos
DRAWN BY	SARATH	Thiruvananthapuram - 05			
CHECKED BY	RAJIRAN	TITLE		MOUTH FLANGE	
APPROVED BY	KRK				
DATE	30.01.2017	DRG NO:		HLL-CED-B2-039-01	
SCALE	NIS	SHEET NO :		01/01	
ALL DIMENSIONS ARE IN MM					

- Note:
1. All the joints must be Tig Welded joints.
  2. Welded joints must be finished with Grinding / Buffing.
  3. All the sharp edges and burrs must be avoided.

Weight of the Component : 12 Kg (approx)



12.5 mm SS 316 Sheet to be Welded.

252.50

40 x 40 x 3 mm SS 316 L Square Tube

$\phi 20$

420

746

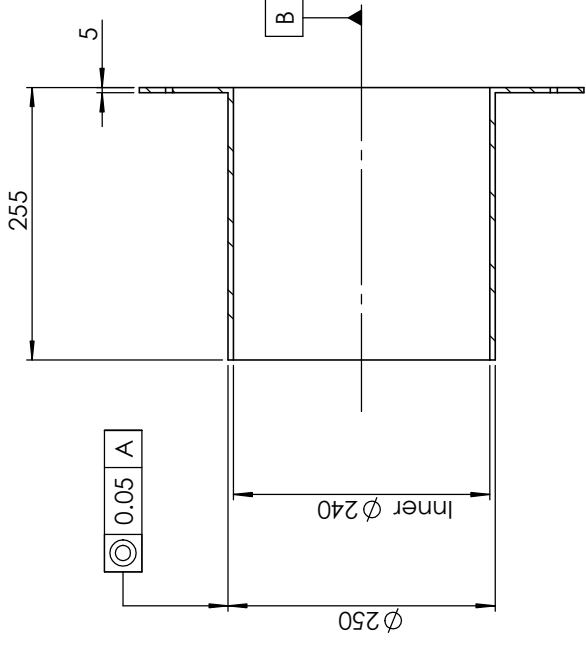
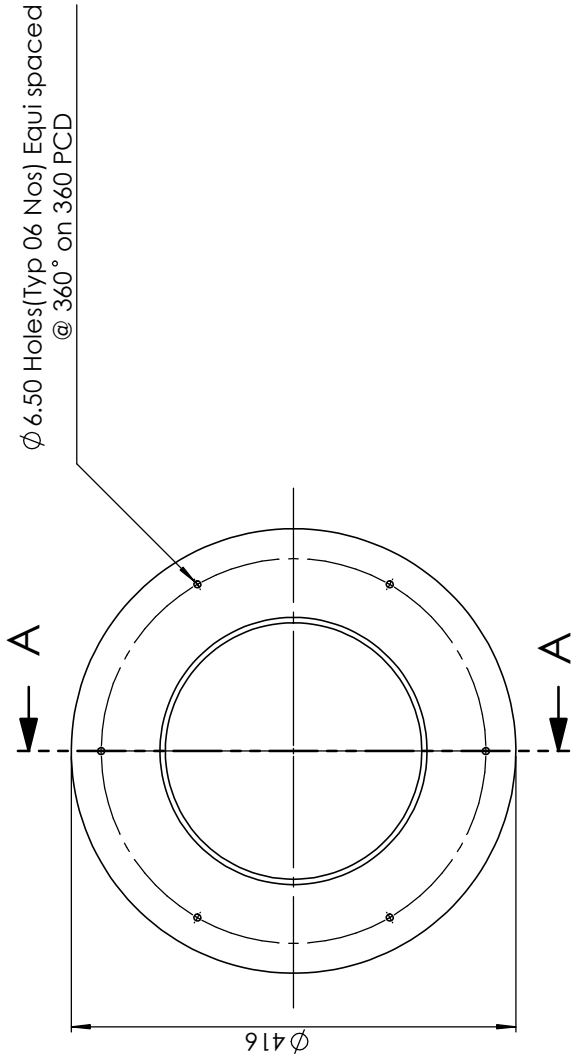
Marked dimensions will be vary with bearing.

Weight of the Component : 35 Kg (approx.)

Note :-

1. All joints must be Tig Welded joints.
2. Welding joints must be finished with Grinding / Buffing.
3. End of Square Tube must be closed with 3 mm Sheet by welding.
4. All the sharp edges and burrs must be avoided.

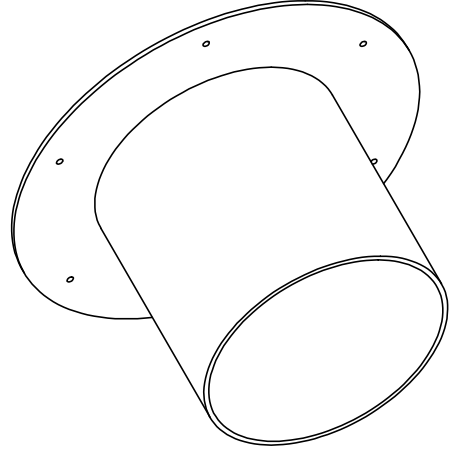
MATERIAL	SS 316 L	QTY	01	NO
DRAWN BY	SARATH	HLL Lifecare Limited		
CHECKED BY	RAJIRAN	Thiruvananthapuram - 05		
APPROVED BY	KRK	TITLE		
DATE	30.01.2017	STAND FOR BEARING		
SCALE	NTS	DRG NO:		
ALL DIMENSIONS ARE IN MM		HLL-CED-B2-039-02		
		SHEET NO : 01/01		
		REV. DATE		



Section A-A

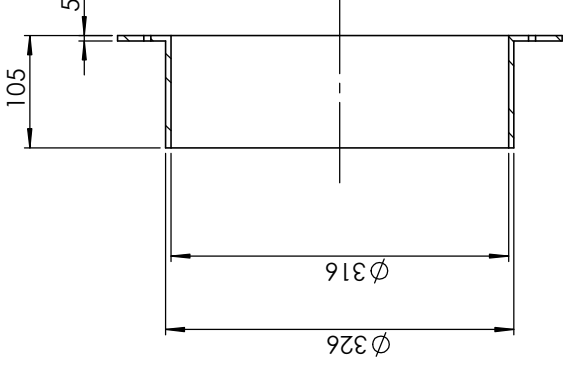
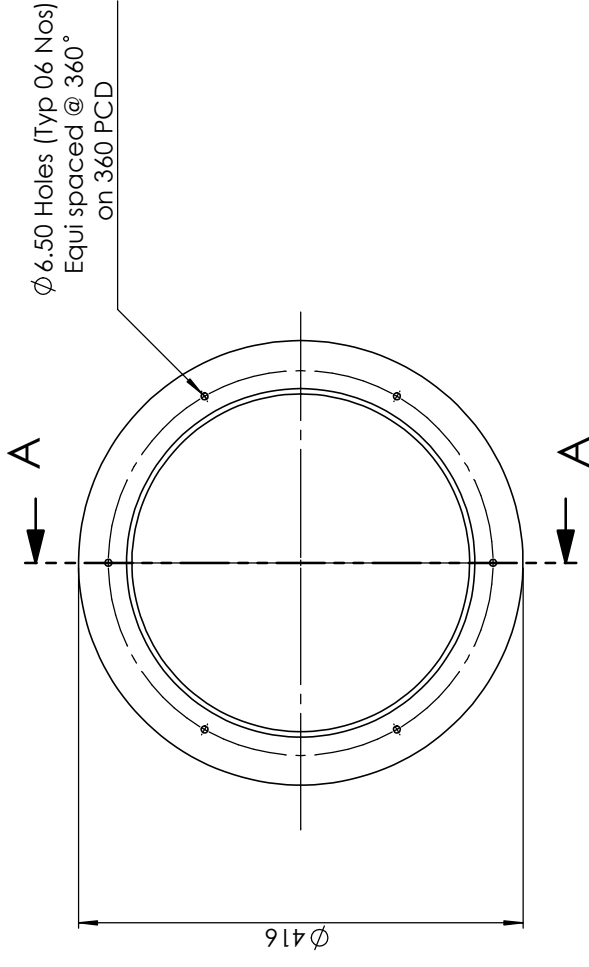
Note :-

1. All joints must be Tig Welded joints.
2. Welding joints must be finished with Grinding / Buffing.
3. All the sharp edges and burrs must be avoided.



Weight of the Component : 11 Kg (approx.)

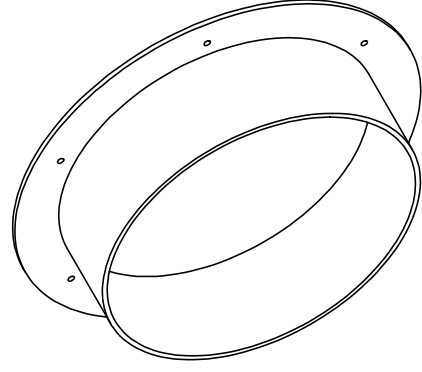
MATERIAL	SS 316 L	QTY	01
DRAWN BY	SARATH	NO	01
CHECKED BY	RAJIRAN	HLL Lifecare Limited	
APPROVED BY	KRK	Thiruvananthapuram - 05	
DATE	30.01.2017	TITLE	
SCALE	NIS	FLANGE FOR BEARING	
ALL DIMENSIONS ARE IN MM		DRG NO:	HLL-CED-B2-039-03
		REV	DATE
		1	01/01/2017



Section A-A

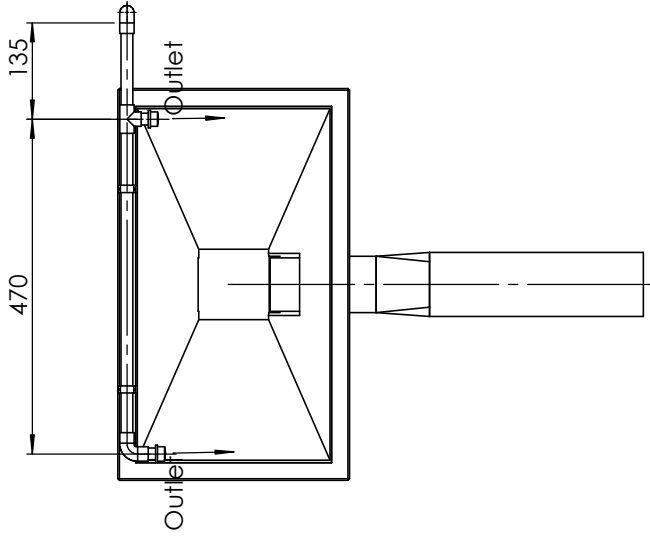
Note :-

1. All joints must be Tig Welded joints.
2. Welding joints must be finished with Grinding / Buffing.
3. All the sharp edges and burrs must be avoided.

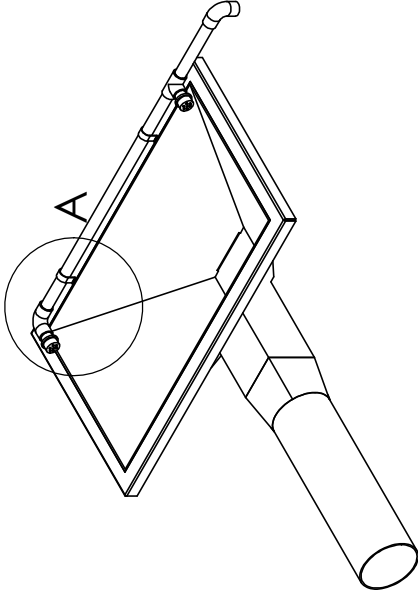


Weight of the Component : 6.3 Kg (approx.)

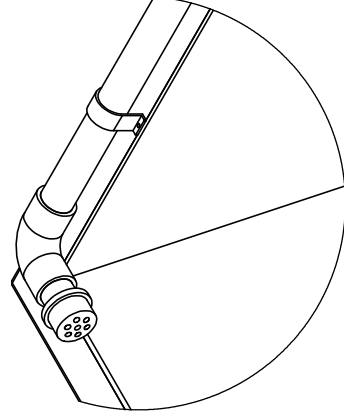
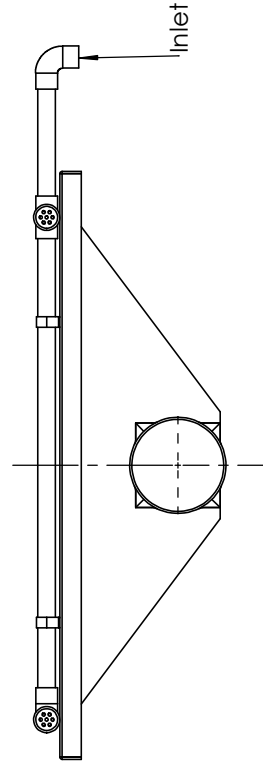
		<b>HLL Lifecare Limited</b> Thiruvananthapuram - 05		QTY 01 No
DRAWN BY SARATH		TITLE <b>OUTER RING FOR DEHYDRATOR</b>		DRG NO: <b>HLL-CED-B2-039-04</b>
CHECKED BY RAJIRAN		APPROVED BY KRK		
DATE 30.01.2017		SCALE NTS		SHEET NO : 01/01
ALL DIMENSIONS ARE IN MM				



SI No	Description	Material	Qty
01	1/2" x 455 mm Pipe	UPVC Schedule 40	01 No
02	1/2" x 135 mm Pipe	UPVC Schedule 40	01 No
03	1/2" x 35 mm Pipe	UPVC Schedule 40	02 Nos
04	1/2" Elbow	UPVC Schedule 40	02 Nos
05	1/2" Tee	UPVC Schedule 40	01 No
06	1/2" End Cap	UPVC Schedule 40	02 Nos
07	1/2" U Clamp	SS 316	02 Nos
08	M3 x 25 mm SHD Bolt	SS 316	04 Nos
09	M3 Plain Washer	SS 316	08 Nos
10	M3 Spring Washer	SS 316	04 Nos
11	M3 Hexagonal Nut	SS 316	04 Nos

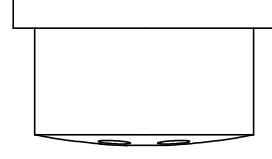


This assembly is to be clamped to Funnel by using U-Clamp as shown.



Detail - A

Ø 3 Holes  
(Typ 07 Nos as Shown)

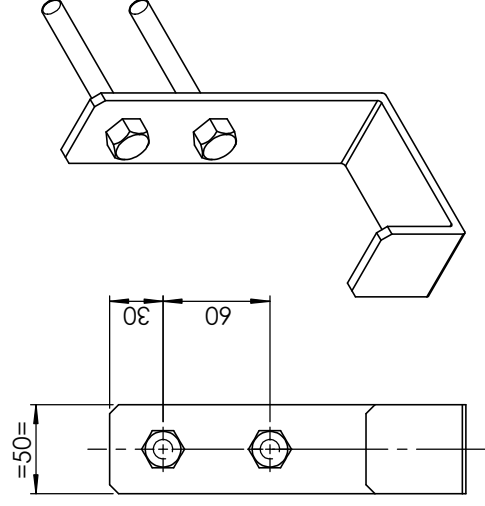
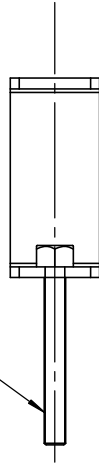


1/2" End Cap  
Material : UPVC  
Qty : 02 Nos

MATERIAL AS SPECIFIED	HLL Lifecare Limited Thiruvananthapuram - 05	QTY	04 Nos
DRAWN BY	SARATH	TITLE	FUNNEL INLET SUPPLY ASSEMBLY
CHECKED BY	RAJKIRAN	DATE	30.01.2017
APPROVED BY	KRK	SCALE	NIS
ALL DIMENSIONS ARE IN MM		DRG NO:	HLL-CED-B2-040-00
		REV:	01/01
		DATE	

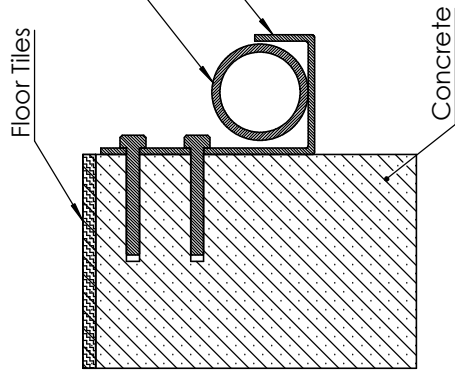


M12 X 100 mm Hexagonal Bolt (Matl : SS 316)  
Typ 02 Nos is to be Welded as shown



Weight of the Component : 1 Kg (approx.)

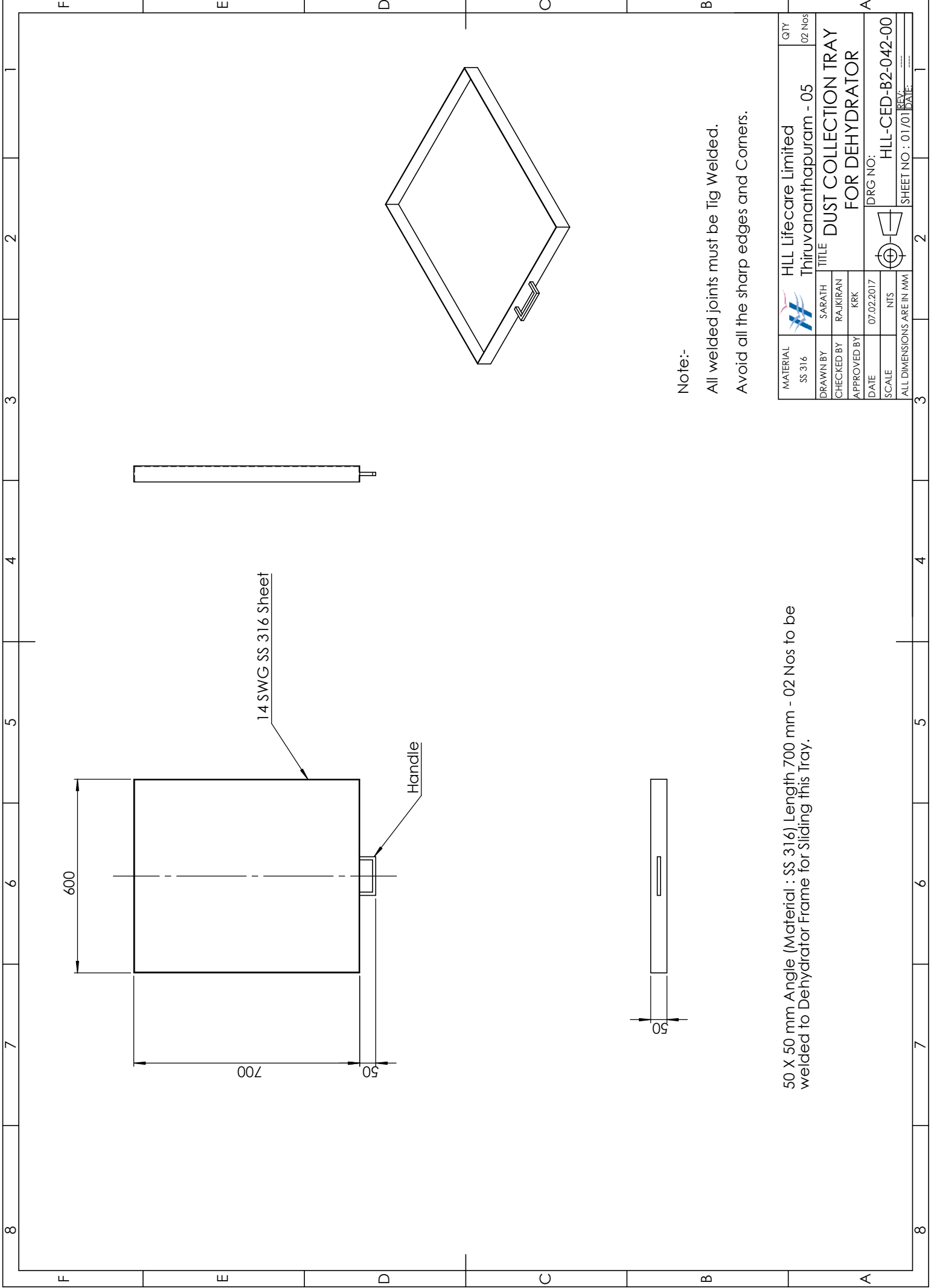
**Clamp**  
**Material : SS 316 L**  
**Qty : 10 Nos**



Clamp are to be Fixed to Concrete wall as shown.  
Flooring & Tiling are to be done after fixing all the Clamps.

SI No	Description	Material	Qty
01	3" Pipe 25mtr Length Schedule 40	UPVC	01 No
02	3" Elbow Schedule 40	UPVC	03 Nos
03	Clamp	SS 316 L	10 Nos

<b>HLL Lifecare Limited</b> Thiruvananthapuram - 05		QTY 01 NO
TITLE <b>CLAMPING AND ROUTING OF DRAINAGE PIPE</b>		
DRAWN BY SARATH	CHECKED BY RAJIRAN	DRG NO: HLL-CED-B2-038-00
APPROVED BY KRK	DATE 30.01.2017	
SCALE NITS		SHEET NO : 01/01
ALL DIMENSIONS ARE IN MM		



**Note:-**  
 All welded joints must be Tig Welded.  
 Avoid all the sharp edges and Corners.

50 X 50 mm Angle (Material : SS 316) Length 700 mm - 02 Nos to be welded to Dehydrator Frame for Sliding this Tray.

MATERIAL	SS 316	QTY	02 Nos
DRAWN BY	SARATH	HLL Lifecare Limited Thiruvananthapuram - 05	
CHECKED BY	RAJIRAN	TITLE	
APPROVED BY	KRK	DUST COLLECTION TRAY FOR DEHYDRATOR	
DATE	07.02.2017	DRG NO:	
SCALE	NIS	HLL-CED-B2-042-00	
ALL DIMENSIONS ARE IN MM			
SHEET NO : 01/01		REV	DATE