

**HLL LIFECARE LIMITED  
(A Government of India Enterprise)  
CORPORATE R& D CENTRE,  
AKKULAM, SREEKARIYAMP.O,  
THIRUVANANTHAPURAM-  
695017**

**Email: [crdc@lifecarehll.com](mailto:crdc@lifecarehll.com)**

**Website: [www.lifecarehll.com](http://www.lifecarehll.com)**

**PH: +91 471 2774700**

**FAX: +914712774707**

## **TECHNICAL BID**

**SUPPLY AND INSTALLATION**

**OF**

**AUTOMATIC STRIPPING & LEACHING MACHINE ON A TURNKEY**

**BASIS**

**AT**

**HLL CORPORATE R&D CENTRE**

**IFB No : HLL/CRD/PUR/TENDER/2014-15/05**

**Date : 20.03.2015**

**HLL LIFECARE LIMITED**  
**(A Government of India Enterprise)**  
**CORPORATE R&D CENTRE,**  
**AKKULAM, SREEKARIYAMP.O,**  
**THIRUVANANTHAPURAM-**  
**695017**

**Email: [crdc@lifecarehll.com](mailto:crdc@lifecarehll.com)**

**Website: [www.lifecarehll.com](http://www.lifecarehll.com)**

**PH: +91 471 2774700**

**FAX: +914712774707**

**INVITATION FOR BIDS (IFB)**

**IFB No : HLL/CRD/PUR/TENDER/2014-15/05**

**Date : 20-03-2015**

HLL Lifecare Limited CR&D invites sealed and super scribed Technical and Price bids from competent and experienced eligible Suppliers for the following work to accomplish the pilot batches as R&D trials at our Corporate R&D Centre.

Sl.No.	Brief description of work	Quantity in Nos.	EMD (Rs.)
1	Supply and Installation of Stripping and Leaching Machine on turn-key basis at our Corporate R&D Centre, Akkulam, Sreekaryam P.O, Thiruvananthapuram	1.00	14,000.00

2. Eligibility criteria for issue of Bid document.

a) Minimum 5 years experience in the relevant field

b) The Bidder should have executed successfully two works, each work costing not less than Rs 4Lacs during the last 5 years.

3. A complete set of bid documents can be had from the Office of the HEAD(R&D) , HLL Lifecare Limited CR&D, Akkulam, Sreekariyam p.o,

Thiruvananthapuram-695017, Kerala, India during office hours on any working day on submission of written application.

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.

4. The bid documents will be available up to 15.00 Hrs. on the previous working day of the opening of the bids.
5. The scheduled date for issue, receipt and opening of bids is as follows.
  - a) Date of issue of tender document - 20.03.2015
  - b) Last date and time for receipt of bids - 26.03.2015, 15.00 Hrs
  - c) Date and time of opening of bids - 26.03.2015, 15.30 Hrs
  - d) Address for communication, receipt and place of opening of bids:

HEAD(R&D)  
HLL LIFECARE LIMITED  
(A Government of India Enterprise)  
CORPORATE R& D CENTRE, AKKULAM,  
SREEKARIYAMP.O,  
THIRUVANANTHAPURAM-695017  
Email: [crdc@lifecarehll.com](mailto:crdc@lifecarehll.com)  
Website: [www.lifecarehll.com](http://www.lifecarehll.com)  
PH:+91 471 2774700  
FAX: +914712774707

The completed and sealed bid documents and all schedules should be submitted to HEAD (R&D).

6. In the above address along with the EMD. 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 '5 (d)' above.

8. In the event of the date specified for bid receipt and opening being declared as a closed holiday for Owner's office, the due date for submission of bids and opening of bids will be the following working day at the appointed times.
9. The Owner 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 Owner and Bidders previously subject to the deadline will thereafter be subject to the deadline as extended.
10. Owner 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.
11. 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.

# SCHEDULE I

## CONDITIONS OF BID

### 1. Definitions

- a. **“Invitation For Bid (IFB)”** shall mean and include the present document, and such other complements and agenda, which may subsequently be issued in this connection.
- b. **“Owner”** shall mean HLL Lifecare Limited, (Thiruvananthapuram) or its units thereof.
- c. **“Bidder”** shall mean the person, firm or Corporation submitting a bid against this Invitation for Bid and shall also include his agents and representatives.
- d. **“Supplier/Fabricator”** 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 work order by the Supplier.
- f. **“Site”** means the Owner’s R&D facility at Kerala.
- g. **“The bid documents”** in addition to the invitation for bids and Conditions of Bid (Schedule I), the bid documents include the following schedules.

SCHEDULE -II	: General Conditions of Contract
SCHEDULE -III	: Detailed Specification
SCHEDULE -IV	: Schedule of Work
SCHEDULE -V	: Format of Agreement

- h. **“Eligible Bidders”** This Bid is opened to all eligible manufacturers and/or their authorized agents.
- i. **“The contract price”** means the price payable to the Supplier under the contract for the full and proper performance of its contractual obligations.
- j. **“Performance of the Contract”** means successful completion of contract.

### 2. Bid Information and Period of Validity

2.1 Bidders shall submit their bids in two parts (TECHNICAL BID and PRICE BID)

2.2 The Technical Bid must include the following information;

- a. The details specified under Technical bid Evaluation Criteria.
- b. All other documents/certificate/information as specified in the bidding document.

2.3 The Price Bid must be as per the following

The bid is invited for “Supply and Installation of Stripping and Leaching Machine on turn-key basis at our Corporate R&D Centre, Akkulam, Sreekaryam P.O, Thiruvananthapuram as per the Specification, Terms and Conditions as specified in the Bid Documents. The Bidder shall indicate the price in the enclosed format (Schedule – IV) inclusive of all the consumables, relevant taxes and duties, other levies, insurance and other local costs, loading and unloading of Supplier’s materials etc. on a turnkey basis as per the Specifications, Terms and Conditions, Schedule of Work specified in the Bid Documents. Civil work is excluded from the scope of the Supplier.

a. Rates should be firm without any escalation on any account till the order is completely fulfilled.

2.4 Bids shall remain valid for 90 days after the date of bid opening prescribed by the Owner.

### **3. Format and Signing of Bid**

3.1 Bidders shall submit their bids in two parts (TECHNICAL BID and PRICE BID) as under.

a) Technical bids, in duplicate clearly marking each “Original Bid” and “Copy Bid”, as appropriate, consisting of the deviations in specifications if any, and also clause-by-clause compliance of Technical Bid evaluation criteria, specifications and commercial terms and conditions and EMD, in separate sealed covers super scribing “Technical Bid” inside a main cover.

b) Price bids, in duplicate clearly marking each “Original Bid” and “Copy Bid”, as appropriate, showing only item wise rates and total prices in separate sealed covers super scribing “Price Bid” inside a main cover.

3.2 When the main cover is opened on the date and time scheduled for bid opening, only the technical bids will be opened.

3.3 Bidders whose technical bids are found substantially responsive will be informed of the date and time of opening of their price bids. Price bids of others will be returned to them unopened.

- 3.4 All pages of the bid, except for un-amended printed literature shall be signed by the person or persons signing the bid. The seal of the company shall be stamped in all pages.
- 3.5 Bids shall be made in English.
- 3.6 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 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 Owner in the following address and
- HEAD (R&D)  
HLL LIFECARE LIMITED  
(A Government of India Enterprise)  
CORPORATE R& D CENTRE,  
AKKULAM, SREEKARIYAMP.O,  
THIRUVANANTHAPURAM-695017  
Email: [crdc@lifecarehll.com](mailto:crdc@lifecarehll.com)  
Website: [www.lifecarehll.com](http://www.lifecarehll.com)  
PH: +91 471 2774700  
FAX: +914712774707
- (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 28.03.2015 (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 Owner will assume no responsibility for the bid's misplacement or premature opening.
- 4.4 Bids should be hand delivered or sent by courier/mail to ensure timely receipt. Telex, Cable, E-mail or facsimile bids will be rejected.

## **Deadline for submission of Bids**

- 4.5 The Owner in the following address will receive the bids not later than the date and time specified in the Invitation for Bids or Subsequent extended dates.

HEAD (R&D)

HLL LIFECARE LIMITED

(A Government of India Enterprise) CORPORATE R&

DCENTRE, AKKULAM, SREEKARIYAMP.O,

THIRUVANANTHAPURAM-695017

Email: [crdc@lifecarehll.com](mailto:crdc@lifecarehll.com)

Website: [www.lifecarehll.com](http://www.lifecarehll.com)

PH:+91 471 2774700

FAX: +914712774707

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

- 4.6 The Owner may, at his 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 Owner 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 the Head (R&D Division)**, in the above address by the date and time stipulated for receipt as above failing which the bid would be considered late and rejected. Owner 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**

1. A prospective Bidder requiring any clarification of the Bidding Documents may notify the Owner in writing, or by fax at the Owners mailing address indicated in the Invitation for Bids. The Owner 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 Owner.



## **6. Amendment of Bidding Documents**

- 6.1 At any time prior to the deadline for submission of bids, the Owner 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 Owner may, at its discretion, extend the deadline for the submission of bids.

## **7. Bid Opening by Owner**

- 7.1 The Owner 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 Owner, the bids shall be opened at the appointed time and location on the next working day.
- 7.2 The Bidders' names, the presence or absence of the requisite EMD and such other details as the Owner, at his discretion, may consider appropriate will be announced at the opening.
- 7.3 The Owner will prepare appropriate bid opening register and bidders present during the opening of the bids and Owner shall sign the same.

## **8. Clarification of bids**

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

## **9. Preliminary examination**

- 9.1 The Owner will examine the bids to determine whether they are complete, whether any computational errors, have been made whether required EMD has been furnished whether the documents have been properly

signed, whether the bid validity is as required and whether the bids are generally in order.

- 9.2 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 Owner deems necessary and appropriate.
- 9.3 Prior to the detailed evaluation, the Owner will determine the substantial responsiveness of each bid to the bidding documents. For the purpose of these clauses, a substantially responsive bid is one which conforms to specifications and all the terms and conditions of the bidding documents without material deviation. The Owner'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 Owner and may not subsequently be made responsive by the bidder by correction of the non-conformity.
- 9.5 The Owner 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.
- 9.6 The Owner'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 Owner reserves the right to examine the details given in the technical bid by visiting the office and supplier facility of the bidder and take decision based on the visit.
- 10.2 The Owner will technically evaluate all bids previously determined to be responsive and open the price bids previously determined to be substantially responsive and technically acceptable with intimation.

## **11. Post-qualification**

- 11.1 Notwithstanding the qualification requirements given in this document, the Owner 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 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.
- 11.3 The Owner 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 Owner will proceed to the next lowest evaluated bid to make a similar determination of that bidder's capabilities to perform satisfactorily.

## **12. Award Criteria**

The Owner 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 Owner will notify the successful Bidder in writing by or 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 and/or Work order.
- 13.2 The signed acceptance of the notification of award & execution of agreement in the format attached on proper stamp paper by the Supplier will constitute a concluded contract.
- 13.3 Upon the successful Bidder's furnishing of Security Deposit, the Owner will discharge EMD submitted by unsuccessful bidders.

## **14. Earnest Money**

- 14.1 Each bid must be accompanied by E.M.D.
- 14.2 The EMD is required to protect the Owner against risk of Bidder's conduct, which would warrant the security's forfeiture

- a. The EMD shall be in the form of Demand Draft from a nationalized bank drawn in favour of HLL Lifecare Limited, Thiruvananthapuram 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. The earnest money deposit of the remaining two unsuccessful bidders will be released after the acceptance of the notification of award by the successful bidder.
- c. In the case of successful bidder, the Earnest Money will be returned after signing the agreement and submission of Demand Draft towards Security Deposit, which they will have to offer for the faithful execution of the contract.

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) In case of the successful Bidder, if the Bidder fails:
  - (i) to sign the agreement.
  - (ii) to furnish security deposit.
  - (iii) does not accept the correction of his bid price pointed out by HLL

## **SCHEDULE - II**

### **GENERAL CONDITIONS OF CONTRACT**

#### **1. PROJECT INFORMATION**

The detailed information of the project given below is as per Owner's present requirement. However, it is not binding on the Owner in any way and shall not govern the scope of works.

#### **2. LOCATION**

The machines are proposed to be commissioned at HLL's Corporate R&D Centre.

#### **3. PRICE**

Price quoted should be firm without any escalation till the order is completely executed and should be for complete Supply and Installation of Stripping and Leaching Machine on turn-key basis at our Corporate R&D Centre, Akkulam, Sreekaryam P.O, on a turnkey basis as per the terms and conditions of this bidding document.

#### **4. TAXES / DUTIES / LEVIES**

The rates quoted for each item should be inclusive of all applicable taxes and duties and any other levies for the successful supplier, Assembly, Leading, Installation, Integration and Commissioning of the moulding machines.

#### **5. INSURANCE**

The Fabricator shall at his own expense carry and maintain insurance with reputed insurance companies to the satisfaction of the Owner as under:

i) Insurance of employees:

The Fabricator shall accept full and exclusive liability for the compliance of all obligations and responsibilities imposed by the Employees State Insurance Act, 1948 and its amendments and any liability or penalty which may be imposed by the Central, State or Local Authorities due to the reason of violation by the Supplier or sub-Supplier of the Employees State Insurance Act, 1948 and its amendments. The Supplier shall agree to fulfill the requirement of the Employees State Insurance Corporation and maintain the declaration forms and all such forms, which may be, required in respect of the

Supplier's, sub-Supplier's employees who are employed in the work provided for or those covered by E.S.I.C. from time to time under the agreement. The Owner shall retain such sum as may be necessary from the total contract value until the Supplier shall furnish satisfactory proof that all contributions as required by the Employees State Insurance Act, 1948 and its amendments have been paid by him.

ii) Workmen's Compensation:

Insurance shall be affected for all the Supplier's employees engaged for this contract. The Supplier shall also carry and maintain all other insurance, which may be required under any law or regulations from time to time. He should also carry and maintain any other insurance, which may be required by the Owner.

iii) Loss or damage and Indemnity Agreement:

The Supplier shall be responsible during the progress of work as well as guarantee period for any liability imposed by law for any damage to work or any part thereof or to any of the material or other things including those of Owner used in performing the work or for injury to any person or persons or for any property damaged in or outside the site. The Supplier shall indemnify and hold the Owner harmless against all liabilities, claims, loss or injury, including costs, expenses and attorney's fees incurred in the defense of same, arising from any allegation whether groundless or not, of damage or injury to any person or property resulting from the performance of the work or from any material used in the work or from any condition of the work or work site or from any cause whatsoever during the progress and maintenance of the work.

iv) Third party insurance:

Before commencing the execution of the works the Supplier, but without limiting his obligations and responsibilities, shall insure against his liability for any material or physical damage, loss or injury which may occur to any property, including that of the Owner, or to any person, including any representative of the Owner, by or arising out of the execution of works or in the work being carried out by the Owner, by or arising out of the provision of clause 5 (iii) here of. Such insurance shall be affected with an insurer and in terms approved by the Owner.

v) The Supplier shall take suitable **Insurance** policy, jointly in the name of HLL Lifecare Limited and the Supplier and the insurance should be valid till the satisfactory completion of the work. The copy of the policy shall be deposited with HLL before commencing the work.

## 6. ESCALATION

The rates quoted by the Supplier in the contract documents shall be final and shall not be subjected to any change due to the increase in labour wages or inflation in the cost of materials or any other price variations due to any reason during the stipulated time period of the contract or during the extended time period of completion.

## 7. PAYMENT TERMS

The payment terms are as follows:-

- a) 60% of the purchase order value will be released against supply of the machine at HLL site.
- b) 30% of the purchase order value will be released after successful commissioning and validation of the machine.
- c) Balance 10% will be released after the defect liability period of 12 months or on submission of a Bank Guarantee for an equal amount from a nationalized bank valid for 1 year from the date of successful commissioning and handing over. No interest shall be paid on the retention amount.

**Tax Deduction: All statutory deductions like Service tax, Income Tax, E.S.I., P.F. or any other government imposed liabilities for this labor contract shall be borne by the Supplier (as applicable at the time of execution of job) and shall be deducted from each bill submitted by the Supplier.**

Owner will not entertain the presentation of documents through Bank.

## 8. DEFECT LIABILITY PERIOD

The defect liability period of the work shall be 12 months from the date of completion of the work and this date will start from successful completion and handing over. If any damage or defect occurs in the work during this period then the Supplier shall rectify the damage or defect at his own expense to the satisfaction of the Owner. If the Supplier fails to do so, then the Owner shall have the authority to get the work done by other means and the expenditure incurred shall be recovered from the Supplier.

Even if Inspection and/or tests are fully carried out by Owner or their representatives, the Supplier is not absolved to any degree of his

responsibility to ensure that all equipment fabricated comply strictly with the requirements as per specifications given in the order, and the Owner shall be free to point out any defect till the defect liability period is over.

## **9. PERIOD OF COMPLETION**

The machines should be successfully commissioned at Owners site within 45days from the date of notification of award.

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

The equipment should be erected, tested, commissioned and handed over to Owner strictly within the time stipulated.

## **11. SUPPLY SCHEDULE**

The Supplier shall furnish to Owner, a PERT/BAR CHART, within 7 days of receipt of the Order. The **PERT/BAR Chart**, should give all important milestones. If any of the initial or intermediary milestones gets delayed for any reasons, the Supplier shall adjust the subsequent milestones in such a way that the final date for handing over of the equipment as per the Order is not effected.

## **12. PROGRESS REPORT**

During execution of the contract, the Supplier shall furnish bi-weekly progress reports to the Owner indicating the progress achieved during the week and the total progress up to the last week as against scheduled and anticipated completion dates in respect of key phases of the work. The Supplier shall also furnish any other information in order to ascertain progress, if called for by the Owner.

## **13. LIQUIDATED DAMAGES FOR DELAYS**

If the equipment is not erected, commissioned and handed over to the Owner within the time stipulated in the Order, Owner may at their option, either (1) recover from the Supplier 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.



#### **14. INSPECTION AND TESTING**

HLL shall have the right to inspect and measure the progress of execution of the Order. The Fabricator should arrange necessary factory acceptance test and shall make available all tools, instruments, apparatus, equipment, facilities and services to enable the Owner's nominee to carryout such inspection/tests without obligations. Not withstanding any such inspection/tests carried out, the equipment shall be accepted only after successful commissioning at the site and the inspection/tests carried out earlier will not relieve his contractual obligations for conforming to the specifications under the Order.

#### **15. DEFAULT BY SUPPLIER**

If the Supplier fails to maintain progress and quality of work proportionate to time period allotted for the work in spite of notices or complete the work within the stipulated time period or extended time period, then the Owner shall have the right:

- i) To determine the contract: In this event, the contract shall be terminated by giving written notice to the Supplier and the unfinished works shall be got completed by labours engaged by the Owner or through other agency at the risk and cost of the Supplier.
- ii) Without determining the contract: In this event, the remaining works shall be got executed through a fresh Supplier in which case the Supplier shall not have any objection or claim on this account.
- iii) Before determining the contract: In this event, if the Owner finds that the defaults of the Supplier can be rectified, then an opportunity shall be given to the same Supplier to rectify the defects /defaults in the specified time.
- iv) Termination of contract for death: If the Supplier is an individual of a proprietary firm and proprietor of the firm dies and if the Supplier is a Attorney of partnership firm and dies, then the Owner has the right to terminate the contract unless and until the Owner is satisfied that the surviving partners are capable of executing and completing the remaining contract. In case of termination of contract, the legal representatives of the deceased Supplier are not entitled for any compensation or claim. Also, the Owner shall not levy any penalty against the damage caused by incomplete work.

- v) Termination of Contract in part or in full for SUPPLIERS default: If the Supplier fails to execute the work in the manner described in the contract documents or if he at any time, in the opinion of the Owner:
- a) Fails to carry out the works in accordance with the contract conditions or as per the specifications mentioned in the documents.
  - b) Stops the execution of works without giving prior information to the Owner.
  - c) Fails to carry out the works to the satisfaction of the Owner both with respect to qualities and time schedule.
  - d) Fails to supply sufficient or suitable tools, tackles, materials and labours etc.
  - e) Commits breach of any of the provisions of the contract.
  - f) Abandons the work.
  - g) Becomes bankrupt during the continuance of the work.

The Owner can terminate the contract in part or in full.

## **16. DELAY IN WORK EXECUTION DUE TO REASONS BEYOND SUPPLIER'S CONTROL**

- 16.1 Force majeure: If the execution of work is delayed due to force majeure, then Owner as per the affected period may extend the time period.
- 16.2 In case work is delayed due to non-availability of stores supplied by Owner or any decision by Owner holding the progress of work, the supplier then upon any such happening causing delay shall immediately but not later than 10 days, give notice thereof in writing to the Owner, but nevertheless use constantly his best effort to prevent or make good delay. The Owner may in his discretion grant such extension of time as may appear reasonable to him and the same shall be communicated to the supplier in writing and shall be final and binding on him and the supplier shall be bound to complete the work within such extended time

## **17. COMMITMENT OF SUPPLIER**

1. Interpretation of Contract documents:

2. All the documents forming part of the contract are to be taken as mutually explanatory, supplementary and complementary to each other. If there is any error, omission or discrepancy in any of them, it shall be brought to the notice of the Owner. The decision of the Owner shall be final and binding. The Supplier shall execute the work accordingly.
3. The Supplier shall examine all the contract documents thoroughly including the scope, nature and magnitude of works he has to execute in accordance with the contract documents.
4. There may be change in layout of site as per technical requirements and the Supplier shall not be entitled for any claim due to such changes & should carry out such changes.

## **18. STAFF AND WORKERS**

The Supplier shall depute qualified engineers for execution of the project. The technical staff employed by the Supplier shall be responsible for the quality and workmanship of the work as per the satisfaction of the Owner. The Supplier's supervisory staff should follow the instructions given by Owner or his authorised representative. If any of the Supplier's staff members is incapable or in-experienced, in the opinion of the Owner, then he should be removed immediately and the Supplier should do suitable substitution.

Technical staff employed should be degree holder from a government-recognized institution or equivalent with at least 3 years practical experience of work in addition to Diploma holders and other experienced supervisory staff.

If the workers or the supervising staff of the Supplier are involved in riotous or illegal activities to such an extent that it becomes necessary to hand over the matter to the police then the Supplier would be solely responsible for the case and all the expenses incurred in the legal proceedings shall be borne by the Supplier.

## **19. CO-OPERATION WITH OTHER AGENCIES AT SITE**

The Supplier or his authorised representatives must work in close co-operation with the agencies executing other works forming the part of the project and also with the representatives of the Owner for the execution of works which are not included in the contract. Supplier shall permit free

access and generally afford reasonable facilities to other agencies or departmental workmen etc.

The Supplier's quoted amount/rate shall be deemed to cater for all the above contingencies and nothing extra shall be admissible on this account.

Supplier should keep his working site clean and the materials brought for work shall be kept in a properly stacked / stored way. The work site should be swept at the end of each working day after removal of debris / left over materials. The Supplier has to take full care so as not to spoil or damage other Supplier's/ Owner's job / material.

## **20. SAFETY OF ADJOINING PROPERTIES**

The Supplier or his authorised representatives should conduct all the operations necessary for the execution of works in such a manner that no inconvenience / damage are caused to the properties of other persons & Owner.

## **21. SETTLEMENT OF DISPUTES**

Any disputes or differences or questions or claims arising under or relating to or touching this agreement shall be referred for arbitration to a Sole Arbitrator under the provisions of the Arbitration and Conciliation Act 1996 or any statutory modification or re-enactment thereof for the time be in force. The award passed by the arbitrator shall be final and binding on the parties hereto.

The contract shall be deemed to have been concluded at Thiruvananthapuram, Kerala and suits and proceedings, if any, shall be only in the courts of competent jurisdiction in Thiruvananthapuram.

The venue of arbitration shall be the place from where the contract is issued.

## **22. EXECUTION OF WORK**

### **General:**

All the works shall be executed in accordance with the detailed drawings, specifications and instructions to be given by the Owner or mentioned in the contract document.

### **Drawings:**

The drawings given in the tender document are as per our present requirement and are meant for the purpose of giving idea of the type and quantum of work to be executed. The Supplier has to examine the existing machines at Owner's facility and discuss with Owner for the exact requirement. He should execute the work as per the detailed working drawings given to him from time to time for execution.

### **Inadequate/substandard works:**

If any work executed by the Supplier is found to be of bad workmanship or not as per the drawings, then the same is to be dismantled and re-executed by the Supplier without claiming any extra payment or extension in time period.

### **Default of Supplier in compliance:**

If the Supplier or his authorised representative fails to follow the instructions given by the Owner regarding any of the works, then the same shall be got executed by other persons employed by the Owner and the expenses incurred shall be borne by the Supplier.

### **Discrepancies between instructions:**

If any discrepancy occurs between the various instructions conveyed to Supplier or his authorised representative or if any misunderstanding arises between the Supplier's staff and Owner's staff, the Supplier shall report the matter immediately to the Owner. The decisions of Owner shall be final and binding. Moreover, no claims for losses due to discrepancies between instructions, doubts or misunderstandings shall be admissible.

### **Change in specifications:**

If there is any variation in specification or any change in make of item, then it has got to be approved from the Owner prior to installation or execution. The rate for the works not mentioned in the schedule will be derived from the rates of similar works mentioned in the schedule of work.

**Work not specified in the specification:**

If, for any work, no specification has been given in the tender document, then the work will be executed as per the IS specifications, and if the work is not covered by IS specifications also, then it should be executed as per standard engineering practice, subject to the approval of the Owner.

**23. LIABILITIES FOR DEFECTS AND RECTIFICATIONS**

If it shall appear to the Owner that any work has been executed with imperfect or unskilled workman, or of quality inferior to that contracted for, or otherwise not in accordance with the contract, the Supplier shall on demand in writing from the Owner or his representative specifying the work, notwithstanding that the same may have been inadvertently passed, certified and paid for, forthwith rectify or remove and reconstruct that work so specified at his own charges and cost, and in the event of failure to do so within a period to be specified by the Owner or his demand aforesaid, the Owner may on expiry of notice period rectify or remove, re-execute the work at the risk of Supplier and the cost shall be recovered from the Supplier. The decision of the Owner as to any question arising under this clause shall be final and conclusive.

**24. CARE OF WORKS**

From the commencement to the completion of works, the Supplier shall take full responsibility for the care of all works including all temporary works and in case any damage or loss occurs then the Supplier shall at his own cost repair and make good the same so that on completion of the work, the same shall be in good order in every respect in accordance with the contract and to the satisfaction of the Owner.

## **25. LABOUR LAWS AND SAFETY REGULATIONS**

### **Labour Laws:**

- i) Labourers below the age of 18 years shall not be employed on the work.
- ii) The Supplier shall not pay less than what is specified by the law to labourers engaged by him on the work.
- iii) The Supplier shall, at his own expenses, comply with all labour laws and the Owner shall not be responsible for any recovery/penalty imposed by the respective authorities for violating the labour laws.
- iv) If the Supplier is covered under the Contract Labour (Regulation & Abolition) Act, he shall obtain a license from the licensing authority (i.e. the Office of Labour Commissioner), by payment of the necessary prescribed fee and deposit, if any, before starting the work.
- v) The Supplier shall furnish to the Owner, the details of the workers employed on the works.
- vi) The Supplier shall comply with the provisions of the existing rules and regulations relating to labour laws.
- vii) The Owner shall on a report having been made by an inspecting officer as defined in Contract Labour (Regulation and Abolition) Act, 1980, have the power to deduct from the amount due to the Supplier any sum required or estimated to be required for making good the losses suffered by a worker or workers by reason of non-fulfillment of the conditions of the contract for the benefit of the workers, or if deductions made from his or their wages which are not justified by the terms of contract or non-observance of the said regulations.

### **Minor Accident on Duty:**

For cases of minor accident on duty not covered under compensation by insurance, the Supplier shall have to compensate the affected person by reimbursing these medical expenses against submission of actual expenditure document. The absence from duty, if takes place, due to such accident shall be considered as special leave and full payment shall have to be made for duration of such absence.

### **Provident Fund:**

It shall be solely the Supplier's responsibility to complete all provident fund formalities as per statutory regulations.

## **26. SAFETY CODE:**

### **Safety and Protection:**

The Supplier shall adhere to safe construction practice and guard against hazardous and unsafe working conditions. While carrying out the work, the Supplier should provide for;

- i) Safety of personnel engaged in the construction.
- ii) Protection and safety of works and materials during their progress.
- iii) Sanitary and hygienic conditions of working and living for his workers, as required by the Owner.

### **Use of Safety Gadgets:**

The Supplier shall have to ensure availability and use of all desired safety gadgets like safety belts, helmets, goggles, hand gloves etc.

### **Unsafe working condition:**

If any activity is found to be progressing without proper and complete safety measures (including use of safety gadgets) being implemented, the Supplier may be asked to stop the work unless he fulfills the desired safety norms. Such delays shall not be allowed to be considered for extension in duration of the allotted time period.

### **First Aid:**

The Supplier shall provide first aid facilities for his employees and those of his sub-SUPPLIERS. The requisite first aid box and medicines should always be available at work site.

### **Supplier's Barricades:**

The Supplier shall erect and maintain barricades required in connection with his operations to guard or protect: -

- i) Excavations
- ii) Hoisting Areas
- iii) Areas adjudged hazardous by the Supplier's or Owner's representatives.
- iv) Charged electrical panels.
- v) Owner's existing property liable to get damaged by Supplier's operation.

### **Preservation of peace:**



The Supplier shall take precautions to prevent any riotous or unlawful behavior by his workers, for the preservation of peace and protection of inhabitants and the security of property in the neighborhood of the work.

## **27. DETAILS OF WORK EXECUTION**

- i) The work shall be done in such a manner so as to clear work front availability for other agencies working at site.
- ii) Finish of work shall be as per drawings & details given by Owner.
- iii) In general the complete work is to be done as per Indian Standard and esthetical norms as specified and detailed in Tender.

## **28. SUPPLIER'S SCOPE OF SUPPLY**

All consumables required for executing the jobs specified in the Schedule of Work, inclusive of welding gases, protective gears, all tools, tackles, scaffolding, consumables & testing equipments shall be procured and supplied by the Supplier at his own cost except for any items specified as Owner supplied.

## **29. RECOVERY FROM THE SUPPLIER**

- i) If the Supplier or his employees damage or destroy the property of the Owner, then the same shall be replaced/ refunded by the Supplier; otherwise the expenses may be recovered from his bill or security deposit.
- ii) All compensation & recoveries to be made as per terms of the contract shall be deducted from the Supplier's bill or security deposit.
- iii) Forfeiture of Security Deposit: Whenever any claim against the Supplier is to be recovered then the same may be made from the security deposit. If the Supplier abandons the work or leaves the work incomplete, then the Owner has the right to forfeit the security deposit.

### **30. SPECIAL INSTRUCTIONS**

- a) The work should be carried out in truly professional manner, neatly finished with proper line, level and plumb. Cleanliness and finishing of the job is of utmost importance. Hence the job should be done most carefully with best workmanship. For all finishing jobs samples should be approved from the Owner before completely executing the work.
- b) The Owner should be immediately informed for any discrepancy in drawings, specifications and instructions in the execution of job before actual execution of particular item having discrepancy.
- c) Any item found to be having been executed with poor workmanship then the Supplier shall have to rectify /reconstruct the work as specified by Owner. No extra charge will be admissible in such case. If SUPPLIERS fails to do so, the Owner reserves the right to rectify/reconstruct the work through some other agency at the expenses of Supplier.
- d) The schedule of activities as submitted by the Supplier shall have to be strictly adhered to. Regular progress reports shall have to be submitted by the Supplier giving all details for monitoring of the schedule.
- e) Special care is to be taken for cleanliness of the site. After the end of day's work, the site should be cleaned immediately.
- f) The Supplier shall have to co-operate with the agencies executing other works in the same area.
- g) While executing the work, the Supplier shall ensure safety and security of the property of the Owner so as to avoid theft etc.

### **31. SECRECY**

HLL Lifecare Limited is the sole owner of the technology, equipment specification and drawings given along with the bidding document and to be given to the Supplier. The details given to bidders and Supplier should be kept confidential and should not be used for any other purpose or should not be used or transferred to third party. The Supplier has to sign a secrecy agreement with the Owner.

## **SCHEDULE III**

### **DETAILED SPECIFICATION OF LEACHING AND STRIPPING MACHINE**

Sub: - Supply and Installation of Leaching and Stripping Machines on turnkey basis at Corporate R&D Centre, HLL Lifecare Ltd, Akkulam, Sreekaryam P.O.

**Note: - The specifications given below are for one machine as per Drawing No. HLL- CED – CR&D - L&S- 001 enclosed.**

- I. Name of Equipment : **AUTOMATIC LEACHING & STRIPPING MACHINE FOR LAB SCALE**
- Quantity Required : 1 No
- Type : Continuous Leaching and Stripping
- **Constructional details** : **As per Drg. No. HLL- CED – CR&D - L&S- 001**
- **Dimensions** : 1250 L x 1100 W x 2130 H (mm).

## TECHNICAL REQUIREMENTS

### Electrical Requirements

Specification for Testing unit of Leaching tank with Condom stripping at Akkulam					
R&D					
SI No	Item Description	Make	Quantity	Remarks	
1	<p><b>Supply and Installation of Direct drive geared motor</b> 0.75 Kw (1 HP) , 3 Ph , 415 V                      Torque : 63 kgm,                      Type: Helical Bevel                      Output Speed : 5 rpm ,                      Mounting : Foot Mounting ,                      Degree of protection : IP 55 ,                      Lubrication :Life lubrication ,                      Terminal box: In Position 4 ,                      Connection Type : Standard , Duty Class: S1,                      Temperature class : F ,                      Cooling : Fan,                      Factor of safety: &gt;1 No of poles : 4 Motor protection :TKO(Thermal Contact NC)                      Gearbox mounting : right angled withmotor. Surface and corosion protection : OKS-S(Corrosivity category C1)</p>	Nord,Rossi,Bonfigoli	1	<p>As per <b>IS/IEC 60034-1,IS/IEC 60034-30-1;2008 - IE1, IE2 and IE3 ,IS/ IEC 60034-2-1, IS/IEC 60034-8 , IS/IEC 60034-11, IS/IEC 60034-12, IS/IEC 60034-26 , IS/IEC 60034-31 ,IS/IEC 60038 ,IS/IEC 60050-41,IS/IEC 60072-1,IS/IEC 60034-5 ,6,7 9 &amp;14,IS/IEC 60529 ,IS/IEC 60079-0,1,7,14,17,19</b> with all the test certificates.</p>	
2	<p><b>Supply and Installation Direct drive geared motor</b> 0.25 Kw (0.3 HP) , 3 Ph , 415 V                      Torque : 27 kgm,                      Type: Helical Bevel                      Output Speed : 5 rpm ,                      Mounting : Foot Mounting ,                      Degree of protection : IP 55 ,                      Lubrication :Life lubrication ,                      Terminal box: In Position 4 ,                      Connection Type : Standard , Duty Class: S1,                      Temperature class : F ,                      Cooling : Fan,                      Factor of safety: &gt;1 No of poles : 4 Motor protection :TKO(Thermal Contact</p>	Nord,Rossi,Bonfigoli	1	<p>IS/IEC 60034-1,IS/IEC 60034-30-1;2008 - IE1, IE2 and IE3 ,IS/ IEC 60034-2-1, IS/IEC 60034-8 , IS/IEC 60034-11, IS/IEC 60034-12, IS/IEC 60034-26 , IS/IEC 60034-31 ,IS/IEC 60038 ,IS/IEC 60050-41,IS/IEC 60072-1,IS/IEC 60034-5 ,6,7 9 &amp;14,IS/IEC 60529 ,IS/IEC 60079-0,1,7,14,17,19 with all the test certificates.</p>	

	NC)Gearbox mounting : right angled with motor. Surface and corrosion protection : OKS- S(Corrosivity category C1)				
3	<p><b>Supply and Installation of 3 HP Pump with Motor Pump Specification</b></p> <p>3 HP SS 316 body and impeller 2. Delivery 1.5" BSP Female threaded 3. Suction 2" BSP Female threaded 4. Medium: Trisodium phosphate &amp; Ammonia 5. Seal: Mechanical seal with chemical resistant durable material TC/TC preferable. Food grade only. 6. Continuous running 7. Application: High discharge jet for stripping rubber product 8. Operating temp-60deg C</p> <p><b>Motor specification</b></p> <p>1. Motor rating: 3 HP 2. Speed: 2900rpm 3. Voltage: 415V, 3 phase 4. Frequency: 50Hz</p>	<p>Pump make : Grundfos/Alfa or equivalent reputed make. Motor make: Grundfos/ABB/Siemens</p>	1	<p>Three phase motor specification confirm to <b>IS 325-1996</b>. Energy efficient motors- Three phase confirm to <b>IS 12615-2004</b> Classification of degrees of protection IP 55 with <b>IS 4691-1985</b>. Methods of cooling <b>IS 6362-1917</b>. Symbols of construction and mounting arrangement <b>IS 2253-1974</b>. Thermal marking and direction of rotation <b>IS 4728-1975</b>, Permissible limits of noise levels for rotating electrical machines <b>IS 12065-1987</b>, Dimensions and output for electric machines <b>IS 1231-1974</b> (Foot mounted motors), Mechanical vibration of rotating electrical machines <b>IS 12075-1987</b>, Other specifications: Energy efficiency: <b>IEEMA: 19-200015</b>. Motors with all electrical contacts to be enclosed in a flame proof enclosure and confirm to <b>IS 6381 &amp; IS 9638</b>, Enclosure should be suitable with operation on both Ammonia &amp; tri sodium phosphate as per <b>IS 2148-1981(11 A)</b> with totally enclosed fan cooled (TEFC), Insulation : Class F1, Duty cycle will be continuous with variable speed and periodic load operation, Motor should be flame proof with confirm to <b>IS 2148</b>. with all the test certificates.</p>	
4	Supply and Instalation of MCB 25 A , 3 PH , 4 Pole	L&T/Siemens/LS/Hager/AB B	1	<p>(As per <b>IS 13032</b> , <b>IS 13947/IEC 60947-5-2</b> , <b>IS 9409/IEC 61140</b> , <b>IS 8623 (part 1 to 3)/IEC 60439(1 to 3)</b> , <b>IS 8504/IEC 60216-4-2</b> , <b>IS 60715/IEC 60715</b> , <b>IS 60898/IEC 60898</b> , <b>IS 60947(Part 1&amp;2)/IEC 60947</b> , <b>IS 10118(Part 1 to 4)</b> , <b>IS 60529/IEC 60529</b> , <b>IS 9676</b>) with Test Certificates</p>	

5	Supply and Instalaltion of Contactor 16 A , 3 PH , 4 pole	LS/GE/ABB/Siemens/Moeller/ L&T/Hager	1	(Digital Type) (As per IS 9676 , IS 9409/IEC 61140 , IS 13947/IEC 60947-5-2 ,IS 60715/IEC 60715 , IS 60947(Part 1&2)/IEC 60947,IS 10118(Part 1 to4 ) with Test Certificates	
6	Supply and Instalaltion of MPCB 0-6 A , 3 PH , 4 Pole	LS/GE/ABB/Siemens/Moeller/ L&T/Hager	1	(As per IS 60947(Part 4 & Section 2)/IEC 60947-4-1 & 2) with Test Certificates	
7	Supply and Instalaltion of MPCB 0-2 A , 3 PH , 4 Pole	LS/GE/ABB/Siemens/Moeller/ L&T/Hager	1	(As per IS 60947(Part 4 & Section 2)/IEC 60947-4-1 & 2) with Test Certificates	
8	Supply and Instalaltion of DOL starter 3 HP , 3 Ph Pump	LS/GE/ABB/Siemens/Moeller/ L&T/Hager	1	(As per IS 1822/ IEC 60529) with Test Certificates	
9	<b>Supply of Machine Panel Board</b> with size 0.5x0.5x0.2 Mtrs with 2 mm Powder Coated CRCA Sheet (Wiring should be as per IS 732 & Earthing of Panel should be as per IS 3043/IEC 60364 , Panel should be as per IS 8437(Part 1&2) / IEC 60479-1&2 , IS 60529/IEC 60529 , IS 9409/IEC 61140 ,IS 9676, IS 5216 with Test Certificates)	Rittal	1	(Wiring should be as per IS 732 & Earthing of Panel should be as per IS 3043/IEC 60364 , Panel should be as per IS 8437(Part 1&2) / IEC 60479-1&2 , IS 60529/IEC 60529 , IS 9409/IEC 61140 ,IS 9676, IS 5216 with Test Certificates)	
10	<b>Supply and Installation of PLC (10 Bit) with 6 I/O digital and Analogue module</b> (As per IEC 61131-3/IEC 61499/IEC 61508 with test and calibration certificates )	Siemens/ABB/Allenbradley / Mistubushi/L&T	1	As per IEC 61131-3/IEC 61499/IEC 61508 with test and calibration certificates	
11	<b>Supply and Installation of illuminated Control Button</b> As per IEC 60947-5-1/ IEC 60947-5-2 & IS 60529/IEC 60529 with Test Certificates	ABB//Schneider	3	As per IEC 60947-5-1/ IEC 60947-5-2 & IS 60529/IEC 60529 with Test Certificates	
12	<b>Supply and Installation of illuminated Push Button</b> (As per IEC 60947-5-1/IEC61058-1 ) with Test Certificates				
	illuminated Push Button (Red&Green)	ABB//Schneider	Set(1 Each)	As per IEC 60947-5-1/IEC61058-1 ) with Test Certificates	

13	<b>Supply and Installation of Emergency Push Button Stop (with alarm)</b> ( As per <b>IEC 60947-5-5</b> with Test Certificates				
	Emergency Push Button Stop (with Alarm) 5A, 450V,22.5MM OD	ABB/EAO/Schneider	1	As per <b>IEC 60947-5-5</b> with Test Certificates	
14	<b>Timer with relay</b>				
	Timer with relay	Autonics/shinko/Omron	2	As per relevent <b>IS/IEC</b> Standard	
15	<b>Supply and Installation of VFD</b>				
a	1 HP VFD	ABB/Allenbradely/GE/Moeller/Vagon/Siemens/Mistubushi	1	As per <b>IS/IEC 60034-2-3</b>	
b	0.5 HP VFD	ABB/Allenbradely/GE/Moeller/Vagon/Siemens/Mistubushi	1	As per <b>IS/IEC 60034-2-3</b>	
Note:					
All the Test and Calibration certificates should be provided at the time supply of material.					
Ferruling(As per <b>IS/IEC 61754-5</b> ) with prited Ferrules is Mandatory for panel internal wiring and all Incoming and out going cables.					
Tagging of all components in the panel is also mandatory.					
All the VFD should be mounted on the panel , Earthing from VFD end should be get connected with the earthing of Machine.					
Naming and Control switches, board should be provided for all MCB , Incoming and out going cables should be dressed properly with					
suitable cable ties(As per <b>IS/IEC 62275</b> ) , All the cables should confirm <b>IS 1554 &amp; IS 694</b> ,All wiring should beAs per <b>IS 732,694</b> ,All wiring should be as per <b>IS 732</b> .					
All safety measures should be taken at site As per <b>IS 5216 ( Part 1&amp;2) , IS 9249/IEC 60414 ,IS 8437(Part 1&amp;2)/IEC 60479-1&amp;2,IS 9409/IEC 61140 , IS 9676</b> .					
Earthing is mandatory on all components it should be as per <b>IS 3043/IEC 60364</b> and earthing should be provided for Panels,Motors , JB's ,					
Entire Machine parts with double strand Cu Flat earthing.Earthing Connection with Machine has to be clamped with suitable					
SS clamps at each 750 mm Interval , The earthing continuity should be maintained by interconnection between eathing flats with suitable Cu connectors.					

Cables Should be provided with Proper Lugs(As per <b>IS/IEC 61238</b> ) ,Ties&Tags ( As per <b>IS/IEC 62275</b> ) ,Ferruling (As per <b>IS/IEC 61754-5</b> ).				
Cable lugs(As per <b>IS/IEC 61238</b> ).				
Proper Glanding(As per <b>IS/IEC 60079</b> ) should be provided for all incoming/out going cables with gland earthing.				
Suitable heat resistant/Flame proof ceramic connectors(As per <b>IS/IEC 61754-7</b> ) should be provided were ever it is necessary.				

## **Mechanical Requirements**

**I. Ball screw System** : Ball type screw with pitch 6 mm and length 1000 mm , 1350 mm and 25 mm dia, Linear bearings should use at the screw ends and intermediate positions.  
speed: -3-5 Rpm.  
(Ball screw should smoothly run through the contour in the above mentioned speed)

## **II. Geared Motor-1**

:  
Type :  
Make : Siemens,ABB,GE  
Rating : 0.75 Kw, 3 Ph, 415 V  
Power Input : 3 Phase AC  
Reduction Ratio : As per the requirement  
Output rpm : 5  
Output shaft : Hollow  
Gear box Design : Foot mounting



### III. Geared Motor-2

Type	:	
Make	:	Siemens,ABB,GE
Rating	:	0.25 Kw , 3 Ph , 415 V
Power Input	:	3 Phase AC
Reduction Ratio	:	As per the requirement
Output rpm	:	5
Output shaft	:	Hollow
Gear box Design	:	Foot mounting

### IV . Base of screw loader

Dimension-1250(L)x1100(B)x750(H)(mm)  
Material- SS 316  
Sheet Thickness -2 mm

See details- HLL-CED-CR&D-L&S-002-00

### V. Leaching, stripping and collection tank

Dimension-560(L)x450(B)x350(H)(mm)  
Material- SS 316  
Sheet Thickness -2 mm

Quantity:

Leaching tank- 1 No  
Stripping tank – 1 No  
Collection tank- 1No

**See details-** HLL-CED-CR&D-L&S-003-00

## **VI . Vertical supporting rod**

Material- SS 316  
Length-1350 mm  
Diameter- 25 mm

Quantity – 4 Nos  
See details- HLL-CED-CR&D-L&S-004-00

## **VII. Top plate**

Material- SS 304  
Top plate dimensions- 300mmx 300 mm  
Top plate quantity – 1No  
Side plate dimension- 1300mmx 300 mm  
Side plate quantity- 2 Nos

**See details-** HLL-CED-CR&D-L&S-005-00

## **VIII . Moving Part**

Dimension- 1250(L)x700(B)x75 (H) mm  
Material- SS 316  
Quantity- 1 No  
See details- HLL-CED-CR&D-L&S-006-00

## **IX . Lead screw details**

### **a). Ball screw -1**

Dimension- 1000 mm (L), 25 mm (Diameter), 6 mm (Pitch)  
Material- SS 316  
Quantity- 1 No

**b). Ball screw -2**

Dimension- 1300 mm (L), 25 mm (Diameter), 6 mm (Pitch)

Material- SS 316

Quantity- 1 No

See details- HLL-CED-CR&D-L&S-007-00

**X. Shaft for horizontal arrangement**

Dimension- 1000 mm (L), 25 mm (Diameter)

Material- SS 316

Quantity- 2 Nos

See details- HLL-CED-CR&D-L&S-008-00

**XI. Inside horizontal moving component**

Dimension- 400(L) x 150(B) x60(H) mm

Material- SS 316

Quantity- 1 No

**See details-** HLL-CED-CR&D-L&S-009-00

**XII. Name Plate**

Dimension- 1250(L)x 50(B)x100(H) mm

Material- SS 316 (RECTANGULAR TUBE)

Quantity- 1 No

**See details-** HLL-CED-CR&D-L&S-010-00

### **XIII . Motor base plate**

Dimension- 110(L) x133(B) x5(Thk) mm  
Material- SS 304 (Flat)  
Quantity- 1 No

**See details-** HLL-CED-CR&D-L&S-011-00

### **XIV. Structure for base**

#### **a). Structural material details**

Dimension – 38x38x4 mm thk  
Material- Mild steel  
Quantity-14 m

#### **a). Intermediate supports**

Dimension – 50x50x4 mm thk  
Material- Mild steel  
Quantity-2.5 m

**See details-** HLL-CED-CR&D-L&S-012-00

### **Other Technical Requirements**

1. Given specification are indicative only. The Bidder should have necessary discussions with concerned HLL authority before coating of the bids.
2. The Supplier shall provide all the manpower, equipments, tools such as welding (TIG/ARC) and gas cutting equipments, forming/bending machines, drilling & grinding machines, other tools & tackles and consumables such as welding rods, cutting gas, drill bits, taps, dies etc required for completing the work successfully in time. The work should be carried out as per the specifications and to the complete satisfaction of HLL officials. HLL will provide all the drawings and technical expertise required for the work.

### **3. Power failure and recovery**

- On power failure equipment shall come to rest, to protect operator, equipment itself and the product.
- Power restart must not be automatic and human intervention must be required
- After regain of power the equipment should start from the step it stopped

### **4. GMP requirements**

- Process control: The equipment must operate and control the following process parameter.
- Speed of the Machine

### **5. Failure mode detection**

- Equipment shall be capable to detect the following failure, notify the operator with alarm and shutdown the process
- Emergency stop

### **6. Cleaning requirement**

- All bolts, nuts on the exterior part of equipment will be with cap head or cap nut.
- Design of equipment should enhance cleaning feasibility by providing minimum sharp corners, minimum crevices & smooth finished welds joints.
- The equipment shall be compatible to different cleaning agents

## **7. Qualification requirement**

- 8.1 General
- 8.1.1 Equipment shall be qualified for design phase (DQ), installation phase (IQ), Operational phase (OQ) and the performance phase (PQ).
- 8.1.2 Vendor shall support client in execution of all the qualification phases.

## **8. MATERIAL OF CONSTRUCTION**

- All following metallic critical contact surfaces should be constructed of 316L grade stainless steel or better with internal mirror surface finish  $< 0.5\mu\text{m Ra}$  and external surface finish matt finish  $< 1.2\mu\text{m Ra}$ .
  - a) Surfaces coming in direct contact of product
- All non-product contact metallic surfaces should be constructed of 316 grade stainless steel or better, external surface finish as matte finish  $< 1.2\mu\text{m Ra}$ .
- All welds should be ground finished to  $< 1.2\mu\text{m Ra}$  and properly passivated

## **9. Delivery of the equipment**

The delivery package shall reach the site of user at least 15 days before the delivery equipments for the engineering check of the documents.

- Operation and maintenance manuals, preventive maintenance schedule for equipment major component as well as the operating system.
- Operation and maintenance manuals for the bought out items.
- Installation instructions/ guideline for equipment.
- Final as-built drawing for equipment.
- Spare and/ or change parts list with ordering information.

- Weld verification reports.
- Instrument calibration certificates with respect to the traceable national reference standard instrument and their calibration procedure.
- Guaranty/ warranty certificates for each equipment and major bought-out item.

## **10. Training**

- A special training for operators has to be included in the offer
- A special training for technical staff has to be included in the offer

## **11. Basic technical requirement**

- A proposal of a possible installation layout should be added to the documentation.
- The manufacturer has to give the clear details on the total weight and the capacity of the equipment.
- The construction of the complete system should be described in the documentation in detail.
- All revolving parts should be mounted on antifriction thrust bearings.
- All the required conditions and data values are displayed on the touch screen.
- Cables, air tubes, etc required from the point (single utility point) to equipment is in scope of vendor.
- Vendor shall provide special tools for maintenance of the equipment.
- Space below the equipment shall be six inches for the accessibility of cleaning.

**HLL LIFECARE LIMITED**  
**(A Government of India Enterprise)**  
**CORPORATE R & D CENTRE,**  
**AKKULAM, SREEKARIYAM P.O,**  
**THIRUVANANTHAPURAM-695017**

**Email: [crdc@lifecarehll.com](mailto:crdc@lifecarehll.com)**

**Website: [www.lifecarehll.com](http://www.lifecarehll.com)**

**PH: +91 471 277 4700**

**FAX: +91 471 277 4707**

## **PRICE BID**

**SUPPLY AND INSTALLATION**

**OF**

**AUTOMATIC STRIPPING & LEACHING MACHINE ON A TURNKEY**

**BASIS**

**AT**

**CORPORATE R & D CENTRE,**  
**HLL LIFECARE LIMITED,**  
**AKKULAM, SREEKARIYAM P.O.**  
**THIRUVANANTHAPURAM – 695 017**



**HLL LIFECARE LIMITED**  
**Corporate R & D Centre,**  
**Akkulam, Thiruvananthapuram - 695017**

**HLL/CRD/PUR/TENDER/2014-15/05**

**a) Leaching Machine**

<b>SN</b>	<b>Item Description</b>	<b>Amount (Rs.)</b>
i.	Total Basic Price	
ii.	Taxes	
iii.	Others if any	
	<b>Total (Rs.)</b>	

**b) Stripping Machine**

<b>SN</b>	<b>Item Description</b>	<b>Amount (Rs.)</b>
i.	Total Basic Price	
ii.	Taxes	
iii.	Others if any	

VALIDITY: ONE YEAR FROM THE DATE OF OPENING OF PRICE BID

Statutory levies if any:

Any other Remark (s):

Certified that the rate quoted will hold good for one year during which period no upward revision will be asked for.

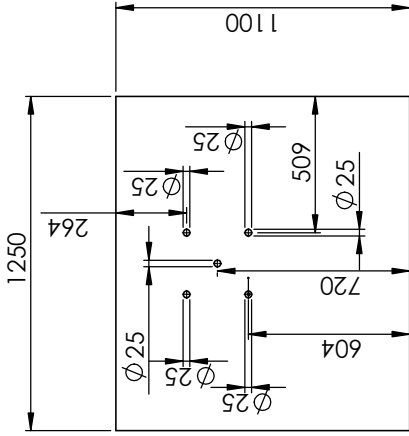
NAME OF Tenderer:- \_\_\_\_\_

Place:

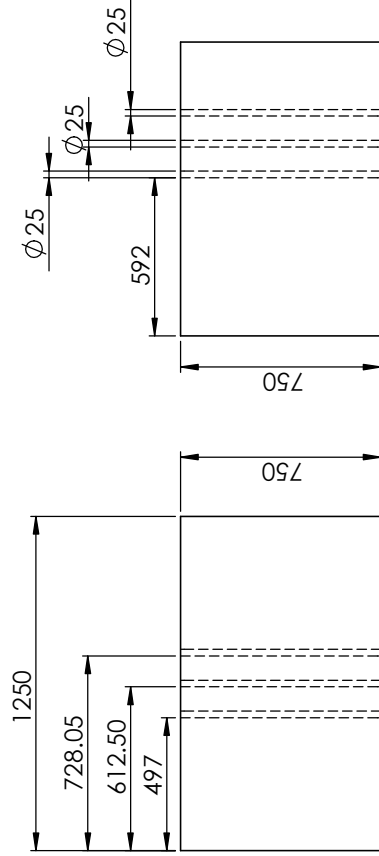
Date:

Address and Signature of the Tenderer  
(With Office Seal)



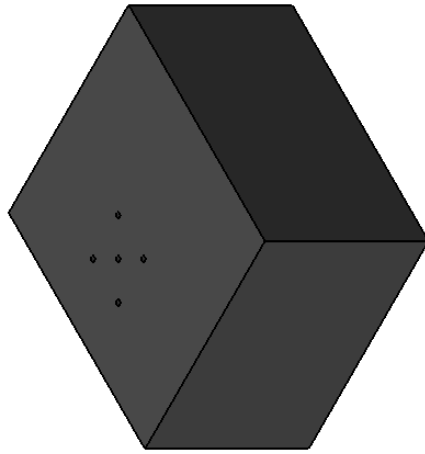


TOP VIEW



FRONT VIEW

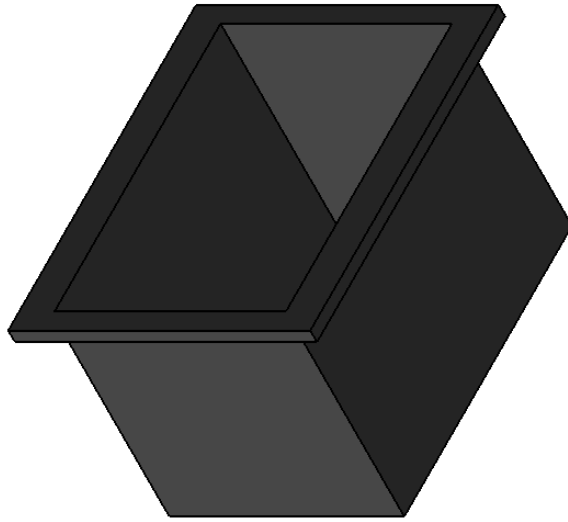
SIDE VIEW



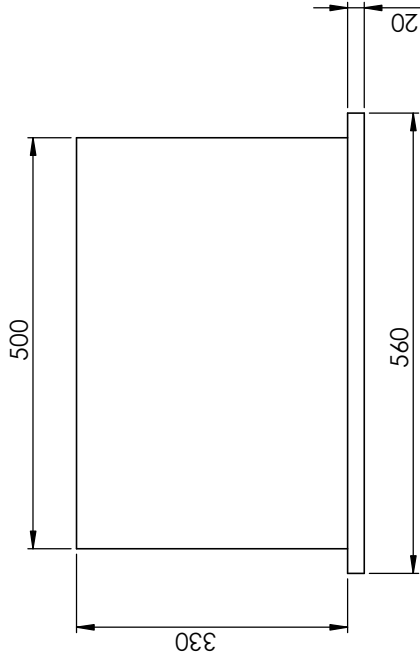
ISO VIEW

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	Base of screw loader	SS 304 2 MM THICK SHEET	1

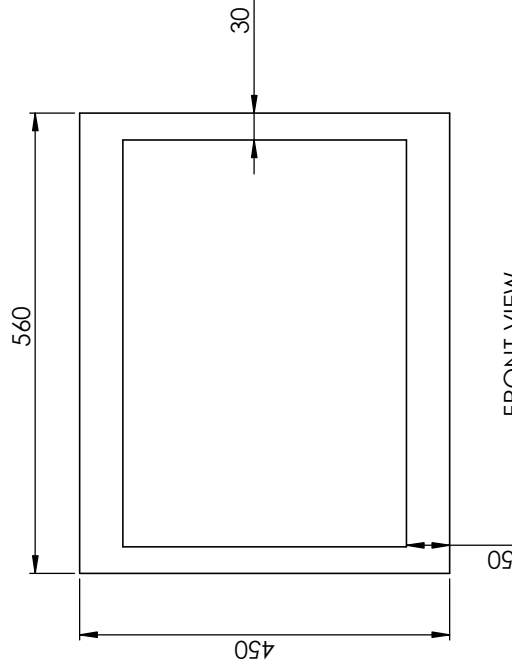
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH:		DIBLUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION	
TOLERANCES: FRACTIONAL DECIMAL ANGULAR:		NAME	SIGNATURE	DATE	TITLE				
DRAWN	BAJIRAH/D			27-1-2015	Base of screw loader				
CHKD					DWG NO.				
APPVD					HLL-CED-CR&D-L&S-002-00				
MFG					SCALE: 1:20				
G.A.					SHEET 1 OF 1				
				MATERIAL:		SS 316		A3	



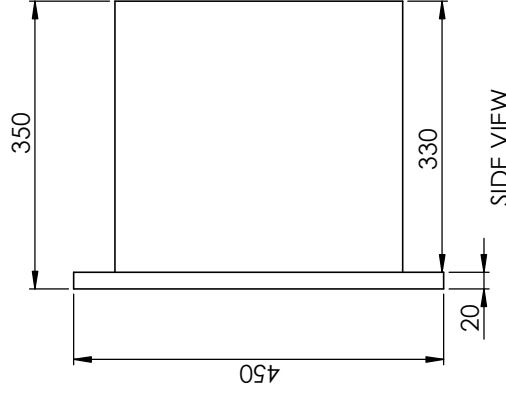
ISO VIEW



TOP VIEW



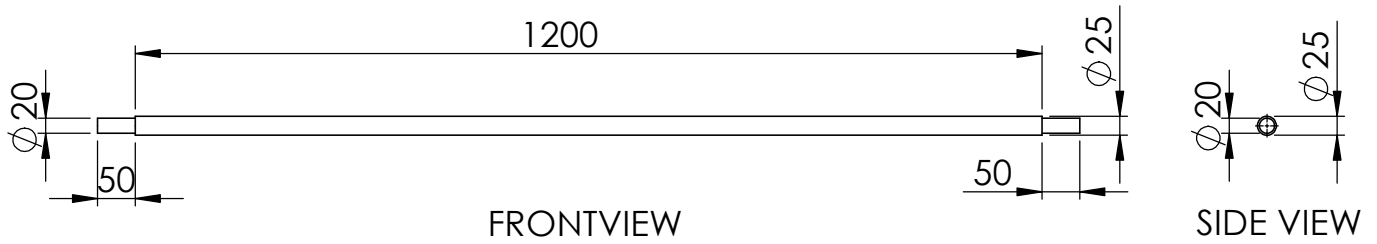
FRONT VIEW



SIDE VIEW

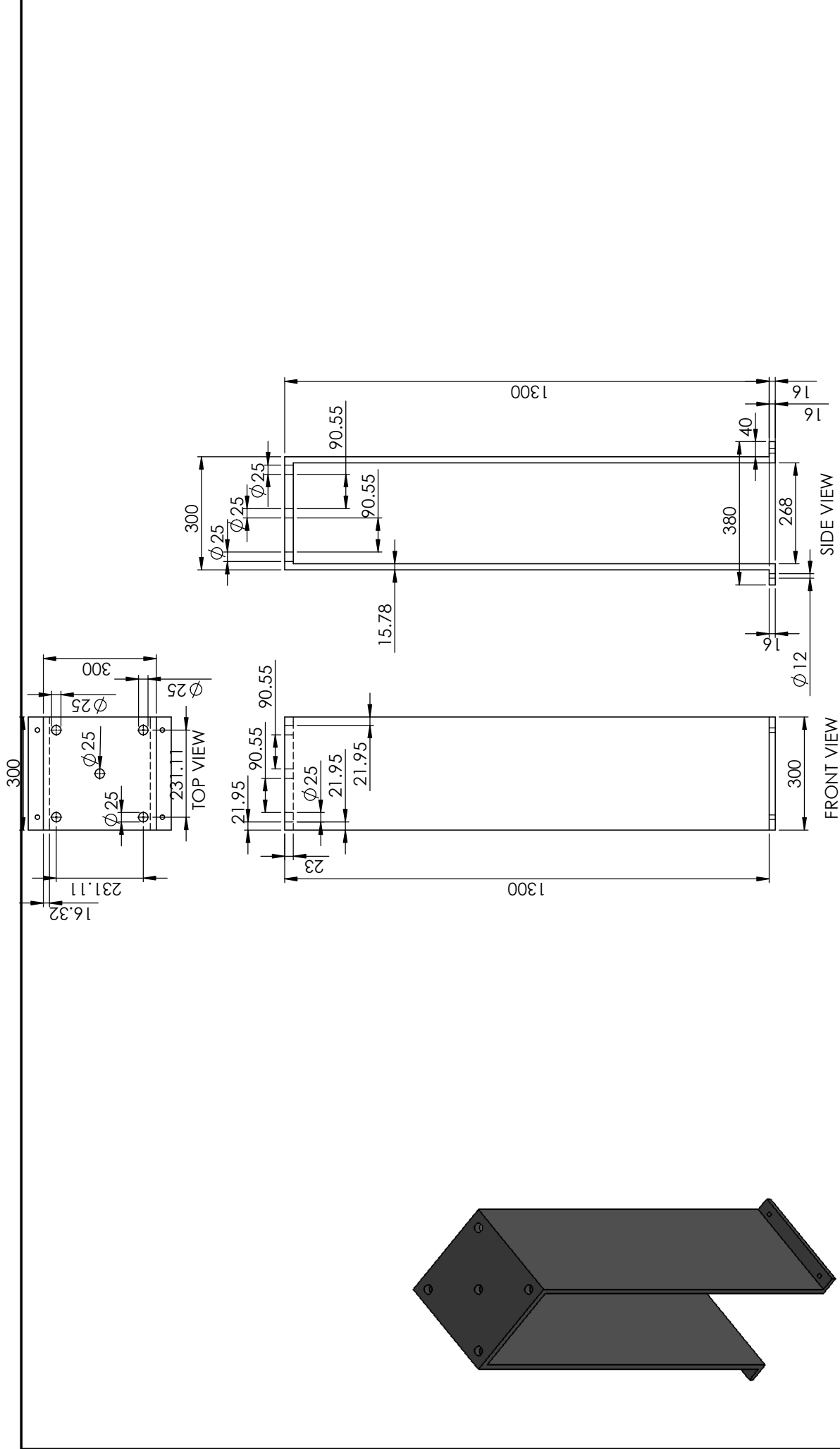
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	Leaching and stripping tank	SS 316	1
2	Stripping tank	SS 316	1
3	Collection tank	SS 316	1

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH:		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION	
SURFACE FINISH:		TOLERANCES:		MATERIAL:		TITLE:		LEACHING TANK, STRIPPING TANK AND COLLECTION TANK	
ANGULAR:		NAME		SIGNATURE		DATE		DWG NO.	
DRAWN		BAJIRAHID				20-1-2014		HILL-CED-CR&D-L&S-003-00	
CHKD								A3	
APPRD								SCALE: 1:5	
MFG								SHEET 1 OF 1	
G.A.								WEIGHT:	
								SS 316	



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	Vertical Supporting rod	25 mm dia and 20 mm dia at ends and 1300 mm length	4

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:		FINISH:		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION			
						<h1 style="margin: 0;">Vertical Supporting rod</h1>					
NAME		SIGNATURE		DATE						TITLE:	
DRAWN		RAJKIRAN.D		10-2-2015							
CHK'D											
APPV'D											
MFG											
Q.A				MATERIAL:		SS316		DWG NO.			
						HLL-CED-CR&D-L&S-004-00		A4			
				WEIGHT:				SCALE:1:20			
						SHEET 1 OF 1					



ISO VIEW

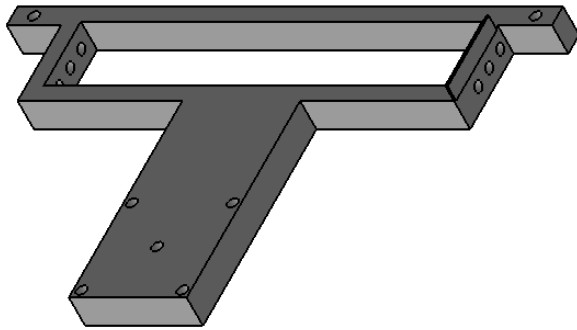
FRONT VIEW

SIDE VIEW

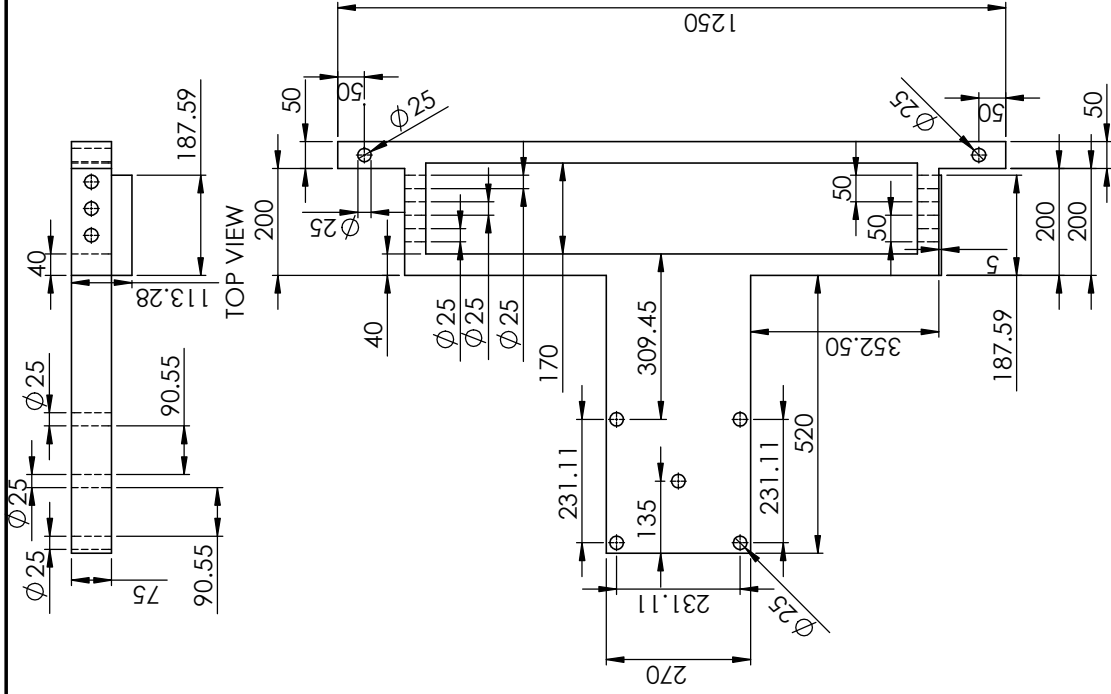
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	Top plate	SS 304, 23 THICK PLATE	2.6 M
2	Side support plate	SS 304 16 MM THICK PLATE	0.9 M2

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH:		DIBLUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION	
SURFACE FINISH:		TOLERANCES:		DRAWN		DATE		TITLE	
ANGULAR:		NAME		SIGNATURE		DATE		HLL-CED-CR&D-L&S-005-00	
		BAJIRAH/D.				29-1-2015		SS 304	
		CHKD						MATERIAL:	
		APPRD						SS 304	
		MFG						DWG NO.	
		G.A.						HLL-CED-CR&D-L&S-005-00	
								SCALE: 1:10	
								SHEET 1 OF 1	

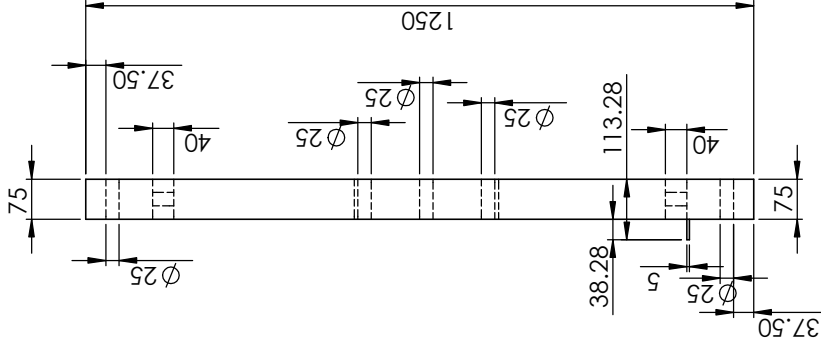
TITLE		HLL-CED-CR&D-L&S-005-00	
DWG NO.		HLL-CED-CR&D-L&S-005-00	
SCALE: 1:10		A3	



ISO VIEW



TOP VIEW

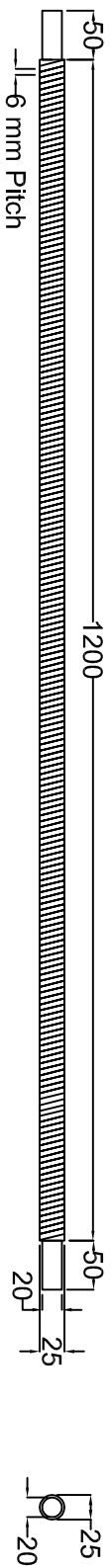


SIDE VIEW

FRONT VIEW

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	Moving part	SS 316	1

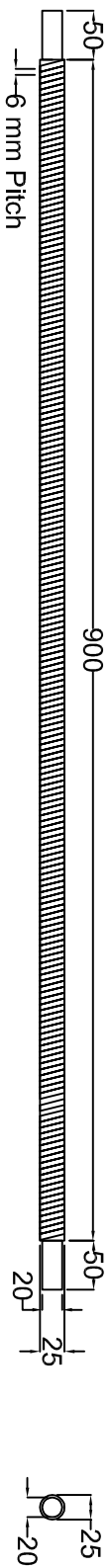
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH:		DO NOT SCALE DRAWING		REVISION	
SURFACE FINISH:		DIBLUR AND BREAK SHARP EDGES					
TOLERANCES: ANGULAR:		NAME		DATE		TITLE	
		SIGNATURE		29-1-2015		Moving part	
		DRAWN				DWG NO.	
		CHKD				HLL-CED-CR&D-L&S-006-00	
		APPVD				SCALE: 1:10	
		MFG				SHEET 1 OF 1	
		G.A.				A3	
				MATERIAL:		SS 316	
				WEIGHT:			



FRONT VIEW

VERTICAL LEAD SCREW

SIDE VIEW

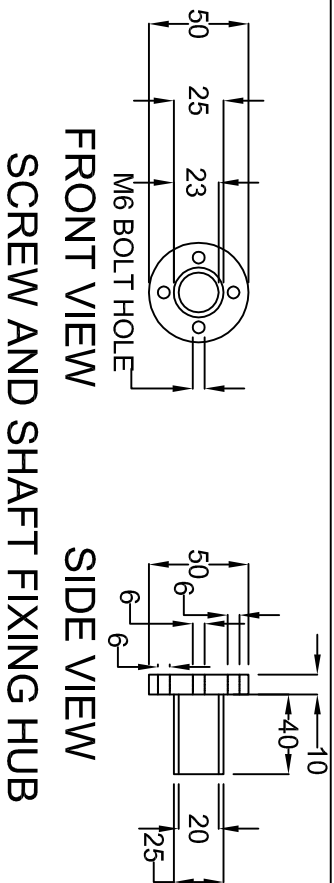


FRONT VIEW

HORIZONTAL LEAD SCREW

SIDE VIEW

MATERIAL DETAILS		
SL. NO	DESCRIPTION	QTY
1	VERTICAL SHAFT -LENGTH-1300 MM, DIAMETR- 25 MM AND BOTH END DIAMETER 20 MM, SS 316	1
2	HORIZONTAL SHAFT-LENGTH 1000 MM, DIAMETER-25 MM AND BOTH END DIAMETER-20 MM , SS 316	1
3	SCREW AND SHAFT FIXING HUB 50 MM DIA AT BOTTOM 25 MM DIA AT THE OTHER END AND FOUR M6 BOLT HOLES, MATERIAL SS 316	8



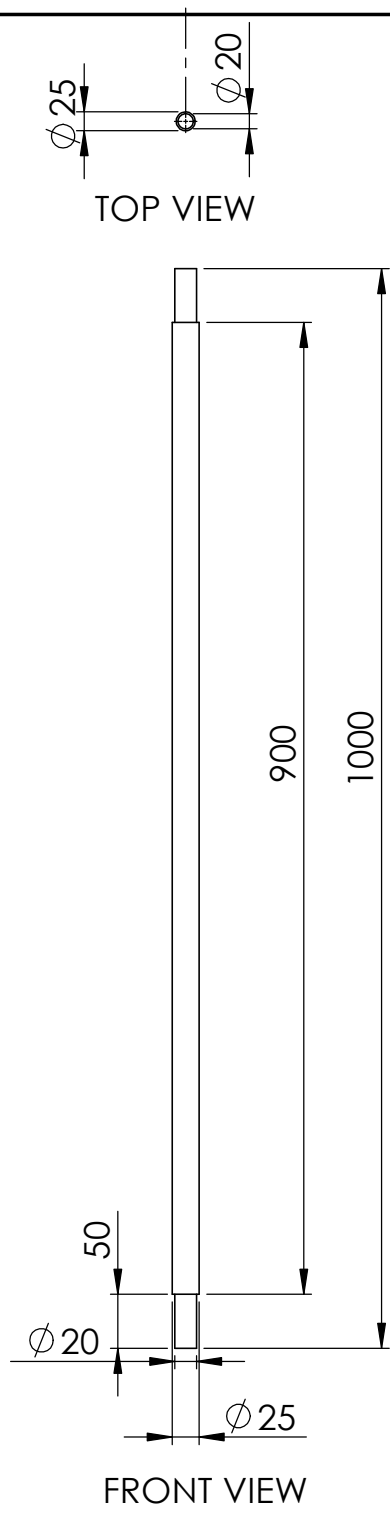
FRONT VIEW

SIDE VIEW

SCREW AND SHAFT FIXING HUB

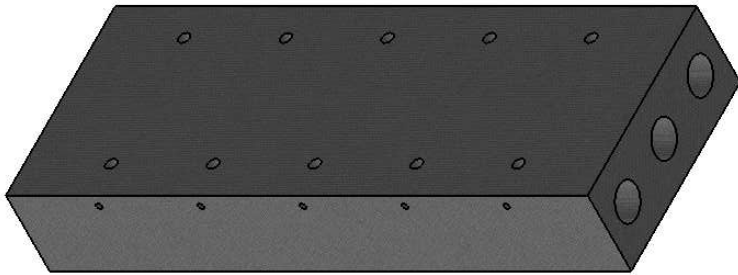
MATERIAL:	<b>HLL LIFECARE LIMITED</b>		NO/OFF:
DRAWN BY:	Rajkiran D	<b>Thiruvananthapuram-5</b>	
CHECKED BY:		TITLE:	LEAD SCREW DETAILS
APPROVED BY:		HLL-CED-CR&D-L&S-007-00	
DATE:	10-2-2015	SHEET NO 1 OF 1	
SCALE:		REV:	DATE:
ALL DIMENSIONS ARE IN MM			



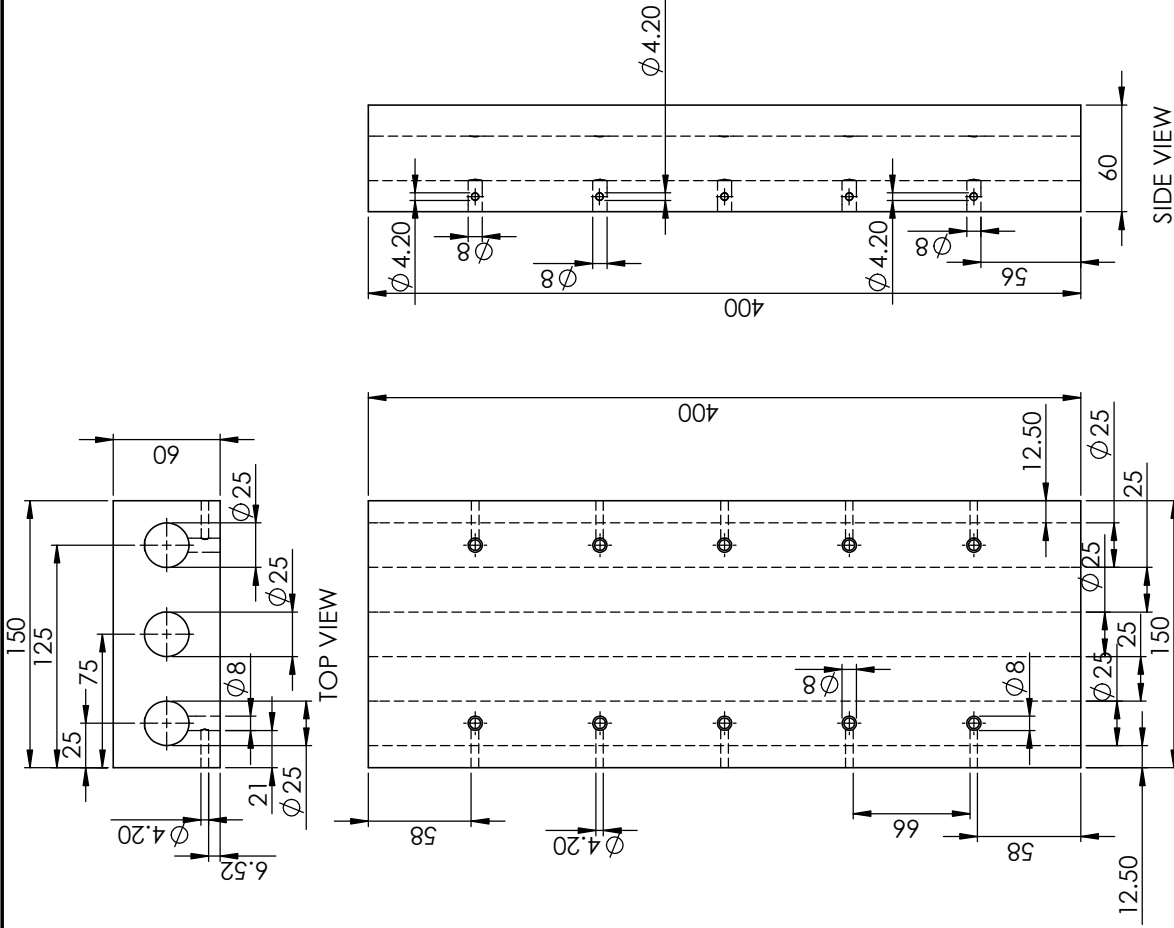


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	Shaft for horizontal arrangement	25 MM DIA AND 20 MM DIA AT ENDS(MATERIAL-SS316)	2

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:				FINISH:		DEBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION	
NAME				SIGNATURE		DATE		TITLE:			
DRAWN				RAJKIRAN.D		10-2-2015		Shaft for horizontal arrangement			
CHK'D											
APPV'D											
MFG											
Q.A								MATERIAL:		SS316	
								DWG NO.		HLL-CED-CR&D-L&S-008-00	
								SCALE:1:10		SHEET 1 OF 1	
										A4	



ISO VIEW



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	Inside horizontal moving component	ALUMINIUM BLOCK	1

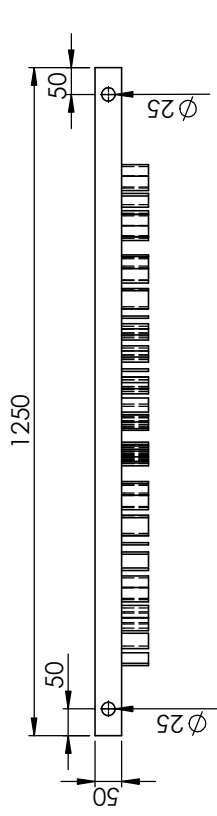
DO NOT SCALE DRAWING		REVISION	
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: ANGULAR:		FINISH:	
DIBUR AND BREAK SHARP EDGES		TITLE	
DRAWN	NAME	SIGNATURE	DATE
CHKD	RAJIBRAJ D.		30-1-2015
APPVD			
MFG			
G.A.			
MATERIAL:		ALUMINIUM	
SCALE: 1:5		WEIGHT:	
DWG NO.		HLL-CED-CR&D-L&S-009-00	
A3		SHEET 1 OF 1	

Inside horizontal moving component

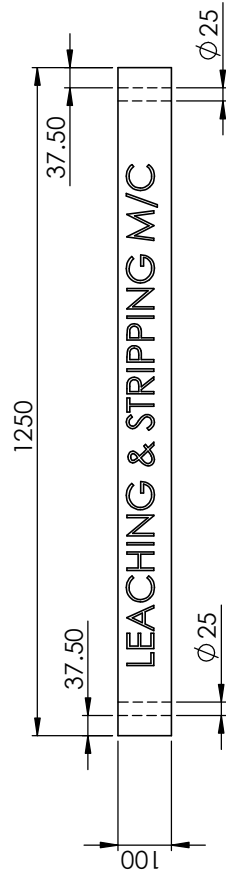
HLL-CED-CR&D-L&S-009-00

A3

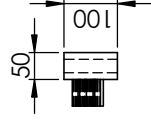
SHEET 1 OF 1



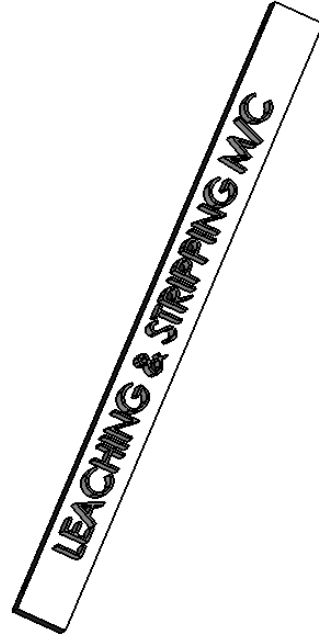
TOP VIEW



FRONT VIEW



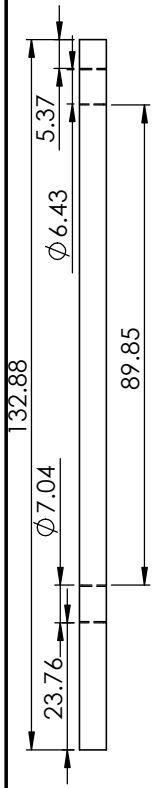
SIDE VIEW



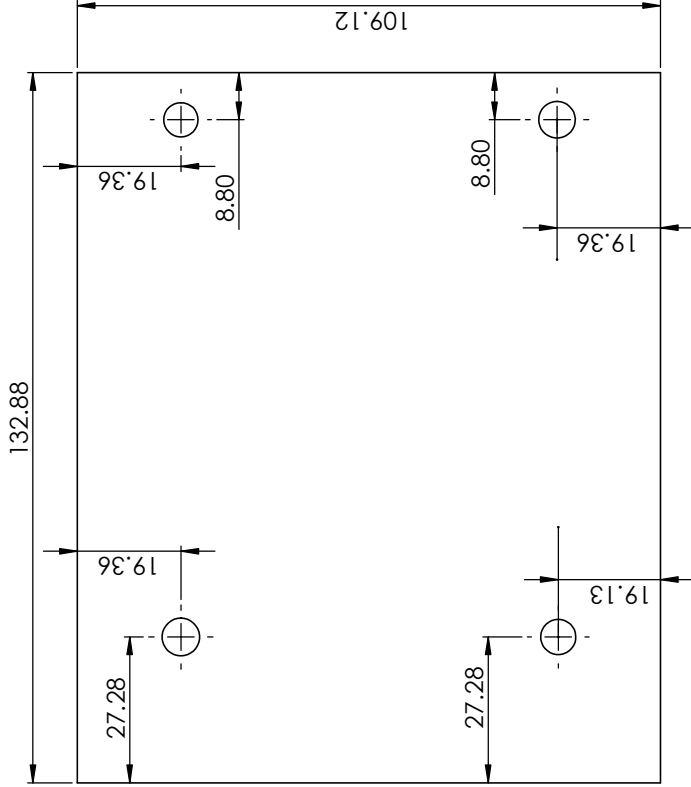
ISO VIEW

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	TEMPATE	1250(L)X100(B)X50(W) SQUARE TUBE (SS 316) AND 2 MM THK	1

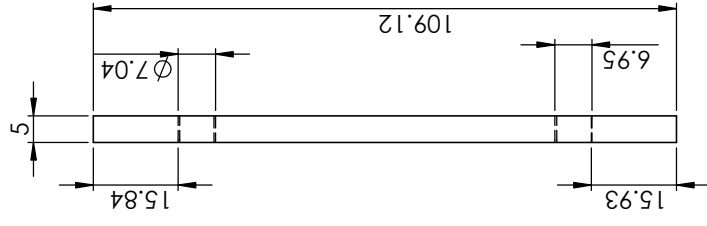
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH:		DIBLUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION	
TOLERANCES: FRACTIONS DECIMALS ANGULAR:									
DRAWN	NAME	SIGNATURE	DATE	TITLE		NAME PLATE			
CHKD	BAJIRAH/D		21-2-2015						
APPRVD									
MFG									
G.A.				MATERIAL:		SS 316			
				DWG NO.		HLL-CED-CR&D-L&S-010-00			
				SCALE: 1:10		SHEET 1 OF 1			



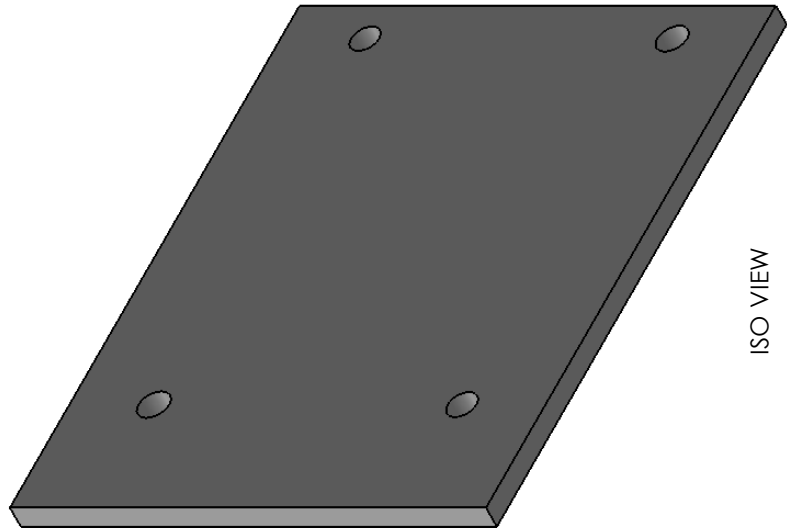
TOP VIEW



FRONT VIEW



SIDE VIEW

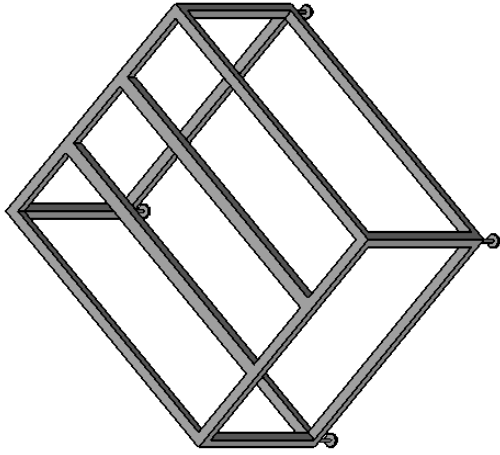
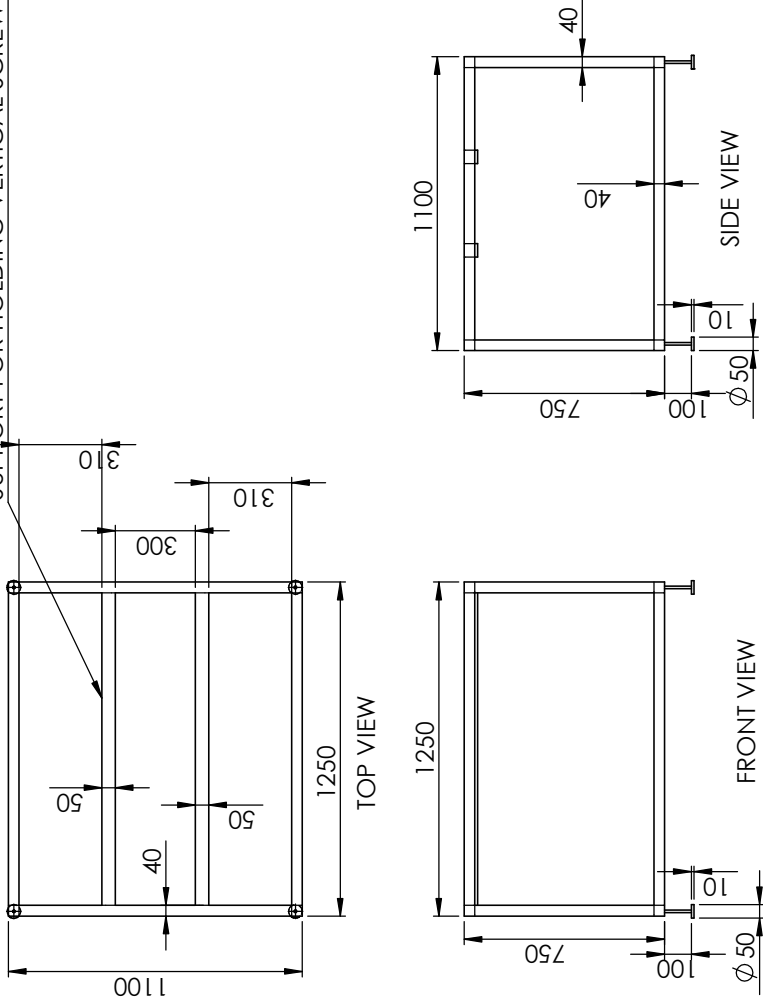


ISO VIEW

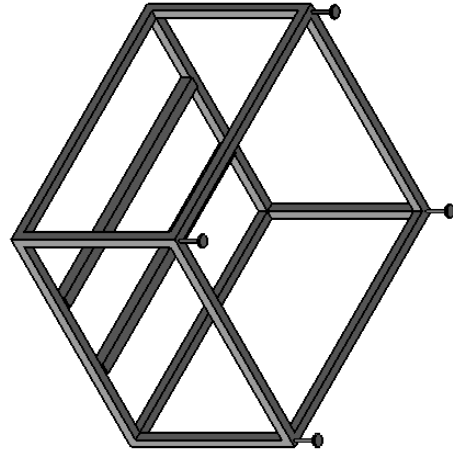
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	MOTOR BASEPLATE	SS 304, 110X133X5 MM THK	1

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH:		DIBLUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION	
SURFACE FINISH:		TOLERANCES:		TITLE		MOTOR BASE PLATE			
ANGULAR:		ANGULAR:		DRAWN		DATE		DWG NO.	
NAME		SIGNATURE		BAJIRAH D.		28-1-2015		HILL-CED-CR&D-L&S-011-00	
CHKD		APPRVD		MFG		G.A.		MATERIAL:	
								SS 304	
								WEIGHT:	
								SCALE: 1:1	
								SHEET 1 OF 1	

SUPPORT FOR HOLDING VERTICAL SCREW AND TANKS



ISO VIEW-2



ISO VIEW-1

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	Structure for base	MS 40X40X4 MM THICK ANGLE	14 M
2	Base stud	SS 304, 100 mm length and 10 mm dia	0.4M
3	Lower base stud	SS 304, 50 mm dia and 10 mm height	4 Pieces
4	INTERMEDIATE SUPPORT	50X50X4 MM THK MS ANGLE(LENGTH 1250 MM)	2.5 M

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS		FINISH:		DIBUR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION	
SURFACE FINISH:		TOLERANCES:		ANGULAR:		TITLE		DWG NO.	
DRAWN:		NAME:		SIGNATURE:		DATE:		HILL-CED-CR&D-L&S-012-00	
CHKD:		BAJIRAH/D.				28-1-2015		A3	
APPRD:								SCALE: 1:20	
MFG:								SHEET 1 OF 1	
G.A.:								WEIGHT:	
								MATERIAL: MS	
								Structure for base	