



# QUAID-E-AWAM UNIVERSITY

OF ENGINEERING SCIENCE & TECHNOLOGY, NAWABSHAH.

No:QUEST/NH/DF/

Dated: 25-07-2017.

## NOTIFICATION

It is to inform that Vice Chancellor , Quaid-e-Awam University of Engineering, Science & Technology, Nawabshah is pleased to constitute Bid Opening and Evaluation committee for the Re-Tender of Civil Department Equipment Funded by the Higher Education Commission , Islamabad .

S #	Name of the officials	Designation	Status
01.	Prof: Dr. Abdulah Saand	Professor /Dean QEC	Convener
02.	Prof: Dr. Anil Kumar	Professor /Chairman Civil Engineering Department /MUET, Jamshoro	External Member
03.	Mr. Fazal Ali Shaikh	Director Finance	Secretary

CC to:

DIRECTOR FINANCE

01. PS to vice chancellor, Quaid-e-Awam University of Engineering Science & Tech: Nawabshah.
02. PA to Registrar , Quaid-e-Awam University of Engineering Science & Tech: Nawabshah.
03. Resident Auditor , Quaid-e-Awam University of Engineering Science & Tech: Nawabshah.



QUAID-E-AWAM UNIVERSITY OF ENGINEERING, SCIENCE & TECHNOLOGY,  
NAWABSHAH  
( Say No to Corruption )

RE-TENDER NOTICE

01. Sealed bids are invited from Scientific Equipment Suppliers having at least 3 years of Experience in related field with 02% **bid security** in the shape of pay order / bank Draft in the name of Director Finance, QUEST, Nawabshah for the supply of laboratory Equipment for Civil Engineering Deptt: of Quaid-e-Awam University of Engineering, Science & Technology, Nawabshah.

2. **Eligibility: Registered with Tax Authorities & Sindh Revenue Board ( S.R.B)**  
( Income Tax , GST , Custom).

3. **Method of Procurement.** The University would adopt **Single Stage – Two Envelop Procedure** for selection of firm. The bidder should submit Two separate sealed envelopes. One envelope should contain the Technical Proposal and the other envelope should contain the Financial Proposal. Both envelopes should be clearly marked “Technical Proposal” and “Financial Proposal”.

4. **Bidding/Tender Documents:**

Tender Documents with detailed specifications can be obtained from the office of the undersigned against the paid challan of **Rs.1000/-** in University Account 44-8 NBP , Engineering University branch , Nawabshah ( Non-Refundable). The bid along with required

**Date of Issuance:** Documents will be issued from the first day of publication in Newspapers of this advertisement up to **24 -08- -2017**

**Date of Submission:** **25-08-2017** (12:00 Noon)

**Date of Opening:** On same day i.e **25-08-2017** (01:00 PM).

5. **Place of issuance, submission, inquiries and opening will be** FINANCE WING, ADMINISTRATION BLOCK, SAKRAND ROAD, NAWABSHAH (67480), SINDH.

6. **Terms & Conditions.**

Under following conditions bid will be rejected:-

- (i) Conditional and telegraphic bids/tenders;
- (ii) Bids not accompanied by bid security of required amount and form;
- (iii) Bids received after specified date and time.
- (iv) Black listed firms or permanently bared by the PPRA or SPPRA Authorities.
- (V) Firms in litigation.

7.. Procuring Agency reserves the right to reject all or any bids subject to the relevant provisions of Sindh Public Procurement Rules 2010.

08. The Tender Document can be downloaded from University website ([www.quest.edu.pk](http://www.quest.edu.pk)).as well as SPPRA ,Karachi website ( [www.sppra.gov.pk](http://www.sppra.gov.pk)).

**DIRECTOR FINANCE**

ISSUED ON: \_\_\_\_\_

ISSUED TO: \_\_\_\_\_

QUAID-E-AWAM UNIVERSITY OF  
ENGINEERING, SCIENCE & TECHNOLOGY  
NAWABSHAH



TENDER DOCUMENTS

For Supply of

Various Equipment of

CONCRETE WATER-IMPERMEABILITY TESTING SYSTEM or  
equivalent & other Items FOR CIVIL ENGG: Deptt: LABORATORY.  
under HEC & QUEST Sponsored Funding

INSTRUCTIONS TO TENDERS  
&  
TERMS AND CONDITIONS

## INSTRUCTIONS TO TENDERS AND TERMS & CONDITIONS.

### 1. BIDS:

Rates shall be for the supply of material described in the Bill of Quantities at QUEST Nawabshah, meeting the following conditions;

- 1.1 Quotation must be in DUPLICATE and should remain valid for 90 days from the date of the submission of tenders.
- 1.2 Telephone/telex/fax/telegraphic tenders shall not be entertained.
- 1.3 Bidders must have an office and workshop / service center facilities preferably in Karachi failing which their offer will not be considered.
- 1.4 Bidders must have factory-trained engineers to provide after sales services.
- 1.5 After opening of tenders no change is allowed to be made in the tender documents.
- 1.6 All taxes (if any) including GST should be included in the quoted price of items.
- 1.7 No advance payment shall be made against the purchase order.
- 1.8 All the information provided in the bid should also be adequately supported by relevant documents and technical brochures. Bidders may attach documents highlighting the competitive edge and unique features of their proposals.
- 1.9 Incomplete tenders will not be acceptable.
- 1.10 The Procuring Agency reserves the right to accept or reject any or all the bids or increase or decrease the quantity of items..
- 1.11 In case of agents bidding for the tender, they must enclose original Proforma Invoice/Fax copy/Quotation from their Principals failing which their offers may be ignored.
- 1.12 The agent must **submit following documents along** with their offer failing which their offer will be rejected.
  - 1.12.1.1 List of clients in Pakistan for a similar work / supply.
  - 1.12.1.2 *The bidder has to provide certificate that all items are new and up to the required standard.*

- 1.12.1.3 Non-Black List Affidavit / Certificate (confirming that bidder has never been black listed from any Government/Semi Government organization).
- 1.12.1.4 Bidder will provide Bank Statement of last two years which shows its Financial Position in the market.
- 1.12.1.5 Each page of Bidding Document shall be signed by the C.E.O or authorized officer of the Firm with Seal ( attach CNIC & Service or visiting Card ) of concerned ) in case of noncompliance Bidding Document will be assumed as incomplete and may lead to disqualification of Bid.
- 1.12.1.6 Bid will be assumed to cover Freight charges , local Transport, Marine & other accidental Insurance of equipment /installation .
- 1.12.1.7 Bid Shall be expressed in Pak: Rupee or convert to one currency.
- 1.12.1.8 Bid shall cover Tariff, Custom Duty, other applicable taxes ,installation , Commissioning charges , local transport , marine / accidental insurance , operational software with rights ( if) and training .
- 1.12.1.9 The Supplier shall provide original copy of Operating software of equipment.
- 1.12.1.10 Supplier will provide original Booklet printed by manufacturer for guidelines and other reasons.
- 1.12.1.11 Bid shall be expressed in Pak Rupees.
- 1.12.1.12 Other essential extra accessories (if) available in original packing or have been given by manufacturer then it will be responsibility of supplier to hand over in original packing to end user / purchaser without any excuse or charging any amount.
- 1.12.1.13 Suppliers shall provide a list original items from manufacturer of accessory , chemicals , test articles etc received with consignment .
- 1.12.1.14 At least Pakistan Engineering Council registered Engineer shall be hired by the suppliers and proof shall be given to :
- 1.12.1.15 Case of payment will be processed after availing no objects Certificate from End User Department.

2. **EARNEST MONEY**

The tenderers should submit their bid along with a Bank Guarantee / Call Deposit of 2% of the Tender Cost as Earnest Money in the name of Director Finance, Quaid-e-Awam University of Engineering, Science and Technology Nawabshah as per ANNEXURE-D.

3. **VALIDITY OF PRICES**

The prices quoted should be valid for a period of at least 90 days from the date fixed for opening of tenders.

4 **SIGNING OF THE AGREEMENT**

Within 14 days of the issuance of the letter of intent / Purchase Order the successful bidder will be required to sign a Contract Agreement with the purchaser (i.e., The QUEST Nawabshah) for the supply of such quantity in whole or in part of the tendered stores as clarified in the letter of intent / Purchase Order.

5 **ON-ARRIVAL INSPECTION & TAKING OVER**

9.1 ON-ARRIVAL INSPECTION (Where applicable)

There shall be inspection by the representative of the Purchaser on arrival of stores at consignees end in presence of representative(s) of the Contractor / Agent if any . The report of inspection which inter-alia should indicate the conditions in which each unit of package has been received will be signed by the above-mentioned representatives.

9.2 **TAKING OVER (Where applicable)**

Upon receipt of the items in the Warehouse of Purchaser and after final inspection by inspection agency (or agencies) nominated by the Purchaser, the Purchaser will issue a taking over certificate in which he shall certify the date on which the items have been so accepted. The taking over of damaged items during the transportation shall be withheld until it has been completely repaired / replaced and checked.

10. **WARRANTY**

- 10.1 The contractor shall issue warranty to the effect that the stores shall be fit for the particular purposes and operations.
- 10.2 The contractor shall guarantee supply of good quality stores in accordance with the specifications and that stores shall be brand new and absolutely free from all defects in materials quality and workmanship. In case of defect the stores or the necessary components shall be replaced by the contractor free of cost up to the Purchaser's premises within a reasonable time.
- 10.3 Warranty period shall be minimum ONE Year or as per Manufacturer, whichever is higher.

12. **BREACH OF CONTRACT**

In case of breach of contract, the damages suffered by the Purchaser shall be recovered to the full extent from the Contractor's Performance Bond and .

13. **DEFAULT-LIABILITY OF CONTRACTOR**

- 13.1 The purchaser may upon written notice of default to the Contractor terminate the contract in circumstances detailed hereunder.
- 13.1.1 If in the judgment of the purchaser the contractor fails to make delivery of items within the time specified in the Contract Agreement or within the period for which the purchaser has granted extension to the contract.
- 13.1.2 If in judgment of the Purchaser, the Contractor fails to comply with any of the other provisions of this contract.
- 13.2 In the event the Purchaser terminates the contract in whole or in part, the Purchaser reserves the right to purchase upon such items and in such a manner, as he may deem appropriate. items similar to the one terminated and the Contractor will be liable to the Purchaser for liquidated damages for delay until such reasonable time as may be required for the final supply of items.



14. **REJECTION**

In the event any portion of the stores supplied by the contractor is found to be defective in material or otherwise not in conformity with the requirements of the contract, the Purchaser shall have the right to either to reject or to request in writing rectification of the stores, then the Contractor shall with utmost diligence and at his own expense correct the same or replace the defective stores. If the Contractor fails to do so, the Purchaser either:

- (i) Opt to replace or rectify such defective stores and charge to the Contractor the excess cost occasioned to the Purchaser plus (15%) fifteen percent.
- (ii) Terminate the Contract for default.
- (iii) In the event the Contractor is not able to rectify or replace the rejected stores within reasonable time, the Purchaser reserves the right to acquire the said stores at a reduced price considered equitable under the circumstances. Nothing in the clause shall affect any claim by the Purchaser under any clause of the Terms & Conditions.

15. **DELAY IN DELIVERY- LIQUIDATED DAMAGES**

15.1 If the Contractor fails to deliver the items with the time laid down in the Contract Agreement or any extension thereof, there shall be a deduction from the Contract Price, as liquidated damages, a sum of 2% of total value per month or a part of the month contract price of each unit of the undelivered stores for each calendar month of delay. Total liquidated damages payable to the Purchaser shall not in any case exceed by five percent (5%) of the Contract Price of the unit or units so delayed and such deduction shall be in full satisfaction of the Contractor's liability for the said failure. The amount will be recovered from the Local Agent's Commission/Performance Bond.

15.2 Should the progress of the contract at any time be lagging behind the programme agreed between the Purchaser and the Contractor, the Purchaser shall notify the Contractor in writing and the Contractor shall thereupon take such steps as he deem fit to expedite the progress of the Contract.

16. **PERIOD OF GUARANTEE**

16.1 The term period of Guarantee shall mean the period of twelve (12) months or as per clause 11.3, from the date on which the items have been put into operation. In any case this period shall not exceed eighteen (18) months from the date of the taking over certificate.

16.2 During the period of guarantee the Contractor shall remedy all defects in design materials and workmanship that may develop under normal use of the said stores upon written notice from the Purchaser who shall indicate in what respect the items is faulty.

16.3 The provisions of this clause included all the expenses that the Contractor may have to incur for delivery of such replacement parts, material of items up to Purchaser's premises.

17. **ACCEPTANCE TERMS**

The submission of the tender against the tender inquiry by the tenderer means that the tenderer has read and accepted the terms and conditions relating to all the tender document and annexure(s) and has thoroughly examined the specifications and particulars in the tender inquiry.

18. **DISQUALIFICATIONS**

Offers are liable to be rejected if, there is any deviation from instructions as laid down in the bid document i.e.

18.1 Technical details/brochures and literature pertaining to the offered items are not attached.

18.2 Tenders are submitted without the required earnest money.

18.3 Offers are received after specified date and time.

18.4 Specification and other requirements are not properly adhered to or manufacturer's brochures show specifications different from those given in the proposal.

18.5 Authorized dealership certificate from the principal is not attached.

18.6 GST/NTN certificate is not attached.

18.7 Any other major discrepancy found in the proposal.

19. **PAYMENT**

19.1 70% payment shall be released at the time of delivery of items, 30% will be released after installation and getting satisfactory certificate from the purchaser / head of the department, no part payment will be allowed.

## **Contract Agreement**

**THIS CONTRACT** is made at \_\_\_\_\_ on \_\_\_\_\_ day of 2017. Between the QUEST Nawabshah (hereinafter called the "Purchaser") of the First Part and M/s ..... a firm registered under the laws of Pakistan and having its registered office at ..... (Hereinafter called the "Supplier") of the Second Part.

**WHEREAS** the Purchaser invited bids for procurement of items, in pursuance whereof M/s..... being the supplier/ manufacturer/ authorized Agent of ..... (Item name) in Pakistan and ancillary services offered to supply the required item (s); and

Whereas the Purchaser has accepted the bid by the Supplier for the supply of .....(item name) and services in the sum of Rs.....(amount)- (Rupees.....) cost per unit, the total amount of .....(quantity of item).....(item name) shall be Rs.....(amount)- (Rupees.....)

### **NOW THIS CONTRACT WITNESS AS FOLLOWS:**

1. In this Contract words and expressions shall have the same meanings as are respectively assigned to them in the Terms and Conditions of Tender Form and this Agreement.
2. The following documents form and be read and construed as integral part of this Contract, viz:
  - a) the Tender Form and the Price Schedule submitted by the Bidder,
  - b) the Schedule of Requirements;
  - c) the Technical Specifications;
  - d) the Terms and Conditions of Contract;
  - e) the Purchaser's Notification of Award (Supply order).
3. In consideration of the payments to be made by the Purchaser to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Purchaser to provide items and Services and to remedy defects therein in conformity in all respects with the provisions of this Contract.

4. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the items and Services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of this Contract at the time and in the manner prescribed by this Contract.

5. This Contract shall be governed by the laws of Pakistan and the courts of Pakistan shall have exclusive jurisdiction.

**IN WITNESS** Whereof the Parties hereto have caused this Contract to be executed at the place and shall enter into force on the day and year first above mentioned.

**Signed/ Sealed by the  
Supplier/ authorized Agent**

1. \_\_\_\_\_

2. \_\_\_\_\_

**Signed/ Sealed by Purchaser**

1. \_\_\_\_\_

2. \_\_\_\_\_

## WARRANTY / GUARANTEE CERTIFICATE

**Firm's Name** \_\_\_\_\_

**Contract No.** \_\_\_\_\_

1. I/We hereby guarantee that the items supplied against the above contract are in accordance with the relevant specifications and terms of the contract and that material used. Whether or not of our manufacture are in accordance with the latest approved standard specifications are of good workmanship/quality throughout, and that we shall replace free of cost, every article or part thereof which before use or in use, shall be defective or not within the limits and tolerance of specifications requirements, or in any way not in accordance within the terms of the contract.
  
2. In case of our failure to replace the defective stores free of cost within the period specified by the purchaser, we will refund the cost involved.
  
3. The Warranty/Guarantee will remain valid for 12 months after receipt of stores by the consignee/installation of items.

Signature : \_\_\_\_\_

Name : \_\_\_\_\_

Status in the firm : \_\_\_\_\_

Dated : \_\_\_\_\_

FORM OF TENDER

**Contractor/Manufacturer/Supplier**

Telegraphic Address : \_\_\_\_\_  
Telephone Number : \_\_\_\_\_  
Fax Number : \_\_\_\_\_

To,

**The Director Finance**

QUEST, Nawabshah.

Dear Sir,

In response to your invitation to Tender No. \_\_\_\_\_ dated \_\_\_\_\_ I/We hereby submit my/our tender in duplicate for the supply of items as per details given in the schedule hereto duly signed by us or such portion thereof as you may specify in acceptance of tender at the prices given in the said schedule and agree to hold this offer open till \_\_\_\_\_.

I/We shall be bound by a communication of acceptance dispatch within the prescribed time.

I/We have understood the Terms and conditions of Invitation to Tender and have thoroughly examined the specifications quoted in the schedule hereto and am/are fully aware of nature of items required and my/our tender is to supply items strictly in accordance with the requirements.

The Tender particulars have been furnished and signed.

Yours Faithfully

Dated: \_\_\_\_\_

**Address:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## TENDER PARTICULARS

**TENDER MUST GIVE SPECIFIC ANSWER FOR EACH ITEM AGAINST EACH OF THE FOLLOWING QUESTIONS**

1. Whether Item offered conforms to particulars specified in the schedules, if not, details of deviation must be stated.
2.
  - 2.1 Brand of items.
  - 2.2 Name & Address of Manufacturer
  - 2.3 Country of Origin of items
3. Earliest date by which delivery can be affected and complete schedule of delivery. If delivery period is different for different items, it is to be indicated item-wise. The delivery schedules offered must be guaranteed.
4. Whether specification of packing as prescribed in Tender inquiry will be adhered to.

## CONTRACT PERFORMANCE BOND

(This Bond must be from Scheduled Bank executed on a Stamp Paper)

Known all men by these present, we, \_\_\_\_\_ AND  
\_\_\_\_\_ address or legal title of Contractor (here insert the legal title  
of \_\_\_\_\_ are jointly and severally bound to the surety).

Quaid-e-Awam University of Engineering, Science & Technology, Nawabshah including its  
successor in office and Assignees acting through the Vice Chancellor, (herein after called the  
"Purchaser") in the sum of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_  
\_\_\_\_\_) to be paid to the Purchaser for which payment we  
jointly and severally bind ourselves and our successors, assignees and legal representatives.

**Signature** \_\_\_\_\_

Signature \_\_\_\_\_

**Dated** \_\_\_\_\_

*The above \_\_\_\_\_ have tendered  
to the Purchaser for the supply of items for the Quaid-e-Awam University of  
Engineering Science & Technology Nawabshah and this tender in part has been  
accepted.*



NOW THE CONDITION OF THIS BOND IS

1. That the said \_\_\_\_\_ shall supply the items on C&F Karachi basis to the Purchaser strictly in accordance with the terms and conditions on which the Contract has been awarded to them and shall complete the supply in terms of the contract.
  
2. AND, if the said \_\_\_\_\_ do not comply with the supply of items within the stipulated period, or such extended period as may be allowed to them by the purchaser, or only partly supply, or do not commence the supply, or commit a breach or failure in the performance or any part of the Contract, the said Bond shall come into force.

AND, if the said \_\_\_\_\_ should execute the contract in terms of the conditions of the Contract and hand-over the work to the Purchaser, his obligation shall be void.

Signature \_\_\_\_\_

Signature \_\_\_\_\_

Dated \_\_\_\_\_

ANNEXURE "D"

**Guarantee No.** \_\_\_\_\_

**Issued date** \_\_\_\_\_

*Expiry date* \_\_\_\_\_

**Amount** \_\_\_\_\_

**Guarantee No.** \_\_\_\_\_

**Issued date** \_\_\_\_\_

*Expiry date* \_\_\_\_\_

**Amount** \_\_\_\_\_

**The Director Finance**

QUEST, Nawabshah.

Where as \_\_\_\_\_ (Herein after called "The Bidder") has submitted its bid dated \_\_\_\_\_ for Quaid-e-Awam University of Engineering, Science & Technology Nawabshah herein after called "The Bid".

And whereas the bidder has requested the bank to issue the Bid Bond/Earnest Money in favour of Quaid-e-Awam University of Engineering Science & Technology Nawabshah for the Sum of Rs. \_\_\_\_\_ (5% of the total estimated price) required to be furnished by the Bidder for consideration of its Bid. Now, thereof we (BANK) \_\_\_\_\_ having our registered office at \_\_\_\_\_ (herein after called "The Bank" hereby Guarantees irrevocably and unconditionally to pay forthwith to the sum of Rs. \_\_\_\_\_ (5% of the total estimated price) without any reference to the Bidder on Quaid-e-Awam University of Engineering Science & Technology Nawabshah first demand in writing stating that the Bidder has withdrawn or unilaterally modified its offer or has after having acceptance of its Bid by Quaid-e-Awam University of Engineering Science & Technology Nawabshah failed to execute the CONTRACT or has failed after executing the CONTRACT to submit to Quaid-e-Awam University of Engineering Science & Technology Nawabshah the performance guarantee/bond required under the CONTRACT.

This guarantee shall remain valid and in force for 120 days from the last date fixed for submission of the Bids that is and any demand for payment by Quaid-e-Awam University of Engineering, Science & Technology, Nawabshah within the said validity period of this guarantee shall be paid forthwith by the bank to Quaid-e-Awam University of Engineering, Science & Technology, Nawabshah.

This guarantee is valid upto \_\_\_\_\_ and any claim arising out of this guarantee must be lodged on or before the \_\_\_\_\_.

WITNESS

\_\_\_\_\_

\_\_\_\_\_

BANK

## Bill of Quantities

S #	Name of the Equipment / part / item	QTY (A)	Rate per Unit (B)	Total AX B= C
01.	CONCRETE WATER-IMPERMEABILITY TESTING SYSTEM or equivalent with Installation and Commission & Training	01		
02.	REBAR LOCAT ION AND CORROSION MEASURING SYSTEM or equivalent with Training	01		
<del>03.</del>	SIEVE SEGREGATION TEST SET or equivalent	01		
04	Three gang mould 70x70x280 mm or equivalent	05 Sets		
05	Three gang mould 25x25x280 mm or equivalent	05 Sets		
<i>Jm</i> <b>Total : Rs. _____</b> <b>2 % Earnest Money : _____</b>				<b>Rs: _____</b>

*five items only.*

# TECHANICAL EVALUTION CRITERIA

## Allocated Marks 100

## Passing Marks : 70

S #	DESCRIPTION	MARKS
1	Features as per specifications required / decided by the evaluation committee. (a) A category 20 Marks , (b) B category 15 Marks (c) C category 10 marks	20
2	Importers status / venture (a) 20 Consignments 10 Marks (b) 10 or not less than 05 05 Marks	10
3	Completed work with import / supply , Training , installations , Commission with certificate :- (a) 50 work 10 marks (b) 40 work 05 ©	10
4	Brand Manufacturers approved authorized Distributor (a) Int'l Distributor 10 Marks , (b) Local Distributor 05 Marks (c) Local vender 02marks	10
5	Local Office of Distributor / Vendor (a) Karachi 5 Marks , (b) Lahore 3 Marks (c) others 02marks	05
6	Sharp Delivery Time / accomplishment of Task (overall * ) (a) Timely Accomplishment 15 days from Supply order 5 Marks (b) delivery within 10 days 3 Marks	05
7	Client List of related Job (a) More than 100 clients with list 5 Marks , (b) Less than 100 but above 75 clients 3 Marks (c) <75 02marks	05
8	PEC Registered Engineers working in the organization (a) above 05 0 5 Marks , (b) < 5 but more than 2 . 0 3 Marks (c) Only 01 0 2marks	05
9	Current bank Balance of Company / Distributor / Vendor a) > 100M 10marks b) < 50 M & >2.0M 05marks	10
10	Last paid 3 month tax Return GST / Income Tax a) 100% paid return 10 marks b) 80% paid return 5 marks	10

R-T.0

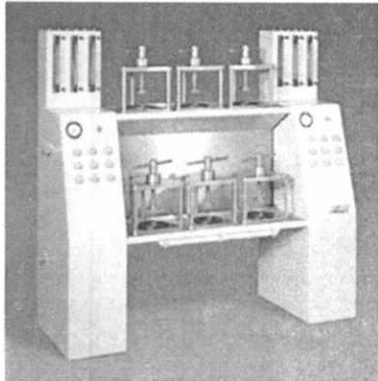
11	Total turnover of company / Distributor / vender per anum a) 100 M 10 Marks      b) 50M      05 marks	10
TOTAL		100



## FEATURES -OR- EQUIVALENCY



### CONCRETE WATER-IMPERMEABILITY TESTING SYSTEM



accepts 6 specimens, with quantitative water permeability testing

CodeCN820      Weight (kg)120      Tariff902480 9

For testing of concrete test specimens with the following dimensions:

- 150 x 150 x 120mm
- 150 x 150 x 150mm
- 200 x 200 x 120mm
- cylinder 150 x 300mm

according to ISO 7031, EN 12390-8, DIN 1048-5 and UNI 9533

- The system has 6 measuring points, at a convenient working height.
- The supporting structure is well built and sturdy.
- Water-collection pans are made of stainless steel.
- Clamping devices have a central spindle (see picture) for easy insertion of the test specimens.
- Clamping units are made of non-rusting materials: stainless-steel and cast aluminium. Cast parts are nickel-plated.

#### Specification

Approximate dimensions (L x W x H):	1375mm × 450mm × 1280mm
Weight (mass):	approx. 120 kg

Maximum air pressure produced by the compressor:	8 bar
Operating pressure at the Water Impermeability Tester	5 bar = 0.5 N/mm <sup>2</sup> (in accordance with DIN 1048, DIN EN 12390-8)
Air compressor	The air compressor is available as an optional accessory. It is especially quiet in operation.
6 test points, with separate shut-off	For test cubes with the following dimensions: 150 × 150 × 120 mm or 200 × 200 × 120 mm
6 inspection windows (sight glass) with scale	For reading off the amount of water penetration at each individual test point
Clamping of the test cubes	By means of a central spindle with self-locking acme thread (trapezoidal thread)
ON / OFF switch, designated as a compressed air valve	For activation of test pressure in accordance with relevant testing standards
Compressed air controller	For setting the desired testing pressure acting on the test cube; the factory setting is 0.5 N/mm <sup>2</sup> , in accordance with DIN 1048

## REBAR LOCATION AND CORROSION MEASURING SYSTEM



Applications:

Testing concrete cover thickness;

Test concrete member internal reinforcement position, rebar spacing, reinforcement position distribution;

Rebar corrosion





### **Model GX-50B**

Applicable steel-bar diameter: dia.6mm~dia.50mm

Tested range of concrete cover thickness: Low range:6mm~90mm;High range:7mm~180mm

Tested range of Steel-bar diameter: dia.6mm~dia.50mm

Permissible error of Steel-bar diameter:  $\pm 1$  grade

Working environment: Temperature:-10°C~+40°C

Dampness: <90%RH EMI: no Strong electromagnetic field

Power supply: 6 dry cells,work more than 30 hours

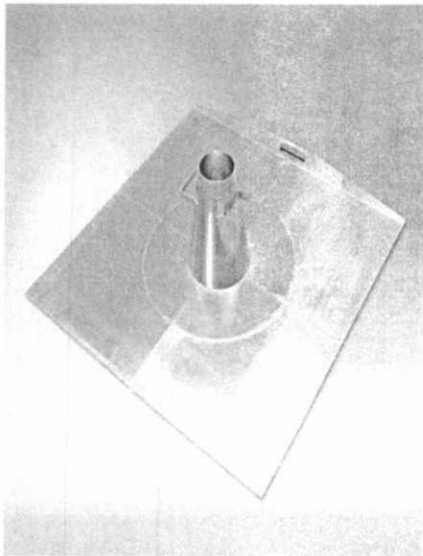
#### Corrosion specification

1. Automatically monitor the ambient temperature without the help of thermometer.
2. Permanently fixed cupric sulfate-copper electrode.No need to perfuse and change cupric sulfate saturated solution both before and after the test, in order to avoid damage to the environment and testers.
3. Two measurement methods: potential method and gradient method, with potential electrode and gradient electrode respectively.
4. Measuring Potential:  $\pm 2000\text{mV}$ ;
5. Test accuracy:  $\pm 1\text{mV}$ ;
6. Measuring Space: 1-99 cm (adjustable)
7. Environment Requirement: Ambient Temperature:-10°C~+40°C, to avoid direct exposure to the sun for a long time.

Relative Humidity:<90%RH;

Electromagnetic Interference: no strong alternating electromagnetic field.

#### ***SCC SLUMP CONE EN 12350-8***



#### **Application**

The test is performed for determining the slump flow and  $t_{500}$  time for self-compacting concrete. The test is not suitable when the maximum size of the aggregate exceed 40 mm. The test is

performed with the slump cone and steel plate.

The SCC slump cone, made from sheet steel protected against corrosion, has a top dia. of 100 mm, base dia. of 200 mm and 300 mm height. The steel plate, 900x900 mm, have engraved circles of 200 and 500 mm dia

Standards:

**EN 12350-8** Testing fresh concrete. Self-compacting concrete. Slump-flow tes

### **L-BOX APPARATUS**

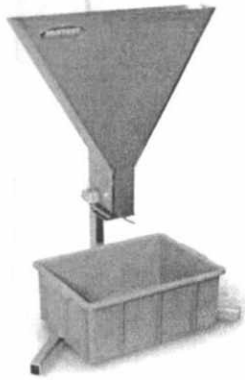


Used for determining the passing ratio of self compacting concrete.

The apparatus consists of a L shaped stainless steel frame, supplied complete with filling hopper.

- Overall dimensions: 700x200x600 mm
- Weight approx.: 18 kg

### **C171 V-FUNNEL**



### Description

V-FUNNEL, "stainless steel" made, having 10 litres capacity, stand mounted.  
The upper edge of the funnel is smooth and reinforced, and the outflow orifice is equipped of an openable seal valve.

Dimensions: 510x400x1000 mm

Weight: 40 kg approx.

### Sieve segregation test set

EN 12350-11



### GENERAL DESCRIPTION

Used for determining the sieve segregation resistance of self-compacting concrete. This method is not applicable to concrete containing fibres or lightweight aggregates.

The set includes a 300 mm dia. test sieve with perforated plate 5 mm opening, pan and plastic bucket 11 l cap.

Weight approx.: 3 kg

## J-RING TEST SET

CA-0355-SP



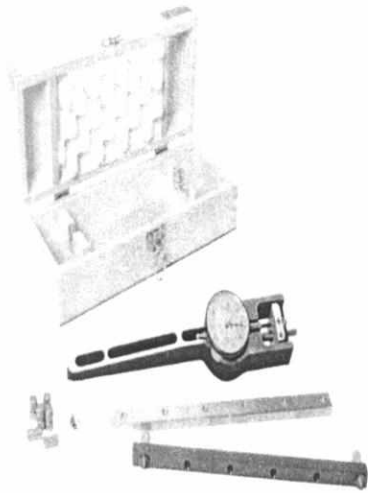
The J-Ring Test Set is used to characterize the ability of self-consolidating concrete (SCC) to pass through reinforcing steel. The test is useful for both mixture qualification and quality control testing.

The test set provides a method to measure the distance of lateral flow of SCC.

Set includes: J-Ring, Steel Slump Cone and plastic base plate with cut-out carrying handles and inscribed concentric circles. Individual items can be purchased separately.

Note: Item ships in two (2) separate boxes

## MULTI-LENGTH STRAIN GAUGE SET



Mechanical gauge is recommended as a substitute for the Whittemore strain gauge for many applications. Designed to measure strain in masonry-type materials, structural components under load, opening or closing of structural cracks, measuring relative structural displacements, rock mechanics testing and drying shrinkage of concrete block testing. Instrument frame is cast aluminum alloy with 5 master settings of 2, 4, 6, 8 and 10 inches, easily set for gauging. Dial indicator has .0001" minimum graduation; effective strain range is 0.3". Maximum linear measurement is 0.4". Set includes: strain gauge, dial indicator, 8 brass inserts, 2 contact seats, 2 mounted contact points, invar master bar, punch bar and one compartmented wood storage case. Metric model has 5, 10, 15, 20 and 25cm settings and dial indicator with 0.02mm graduations.

## **DIGITAL STRAPIN GAUGES**



Used to determine the strain (length changes) in concrete specimens and structures, rock strata, different parts of a structure, in remote areas and under adverse conditions, using a single instrument.

Different models are available with analogic or digital gauge, 100, 200, 300 mm measuring length, depending on the standard length to be measured. The instrument can also be used for other structures like steel and wood.

The standard equipment comprises:

- Strain gauge (extensometer) complete with analogic or digital indicator 0,001 mm graduations (see available models)
- Calibration bar used also to fix the datum disc on the structure.
- 50 datum discs.

Adhesive compound for datum discs.

The whole contained in carrying case.

**1.Models with "digital gauge" (C359 series)** are battery feeded, with reading values in mm (sens. 0,001 mm) and inch.

Complete with battery but **"without"** RS232 port.

**2-Models with "digital gauge" (C363 series)** are battery feeded, with reading values in mm (sens. 0,001 mm) and in inch (sens. 0,0001").

Complete with battery and RS232 connector to PC

## MECHANICAL STRAIN GAUGES



### MAIN FEATURES

Mechanical strain gauges, 58-C0230/30D

- Digital gauge 0.001 mm resolution
- Serial output for PC connection (with 82-D1261/LINK)

### GENERAL DESCRIPTION

This apparatus used for determining the length changes was originally designed for use on concrete structures, but can also be conveniently used for any other type of structure including steel. The test set includes the extensometer with digital gauge resolution 0.001 mm, standard bar, calibration bar, 50 datum discs, adhesive compound for datum discs and carrying case. Two models available: 100 and 300 measuring base.

- Carrying case dimensions: 300x400x110 mm
- Weight approx.: 2.1 kg

### Accessories

#### 82-D1261/LINK

Serial cable for PC connection

#### 58-C0230/1

Datum discs. Pack of 50 pieces. Weight 0.1 kg

#### 58-C0230/2

Adhesive tube, 20 g

### Ordering info

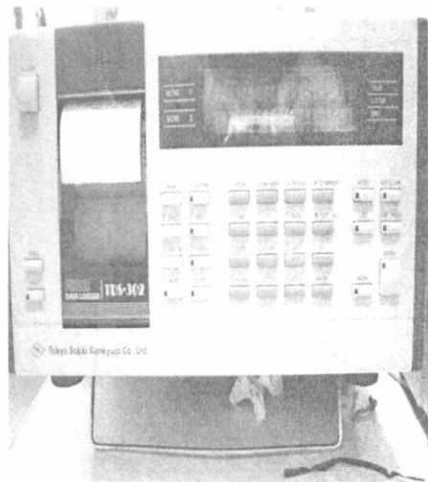
#### 58-C0230/10D

Mechanical strain gauge for the measurement of length variation. Measuring base 100 mm x 5 mm range. Digital gauge, 0.001 mm resolution, output for PC connection (special cable required, see accessories)

#### 58-C0230/30D

Mechanical strain gauge for the measurement of length variation. Measuring base 300 mm x 5 mm range. Digital gauge, 0.001 mm resolution, output for PC connection output for PC (special cable required, see accessories)

#### **DATA LOGGER AND PORTABLE SWITCHBOX**



Data logger and portable switchboxes are instruments used for high speed strain gauge measurement. It can print output data with a rate of 12.5 channel/sec. It also has built-in switching box of 10 channels and is extendable up to 500 channels. It is equipped with interface board to make it possible to communicate with computer using RS-232C and GPIB interfaces.

#### **Digital Length Comparator 34-8507**

***Category:***

Cement

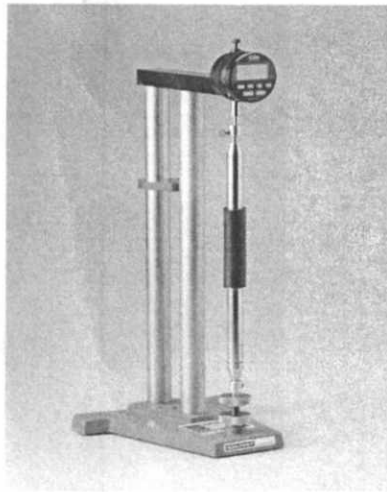
Sub Category:

Soundness, Expansion

Product Group:

Length Comparator





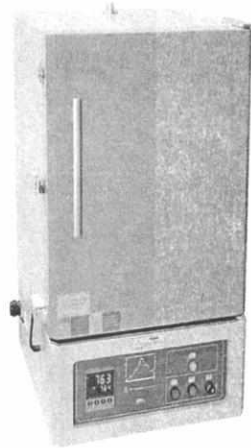
**Specification**

<b>Dimensions (l x w x h) mm</b>	7-1/2" w. x 7-3/4" d. x 17-3/4" h. (190 x 197 x 451 mm)
<b>ASTM C151</b>	Yes
<b>ASTM C157</b>	Yes
<b>ASTM C227</b>	Yes
<b>ASTM C490</b>	Yes
<b>ASTM C531</b>	Yes
<b>AASHTO T107</b>	Yes
<b>AASHTO T160</b>	Yes
<b>Description</b>	Digital Length Comparator

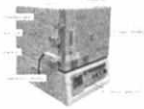


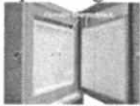
**Specifications**



<b>Frame</b>	Metal, double-post construction; rust resistant finish.
<b>Anvils</b>	One movable and one stationary; shaped to receive contact points in sample bars.
<b>Indicator</b>	Digital indicator with English or Metric units selectable.
<b>Reference Bar</b>	Invar metal.
<b>Dimensions</b>	7-1/2" w. x 7-3/4" d. x 17-3/4" h. (190 x 197 x 451 mm)
<b>Weight</b>	14.9 lbs. (6.8 kg)

**UL-Standard 1100°C Large Muffle Furnace (16x16x16", 64 L) with Digital Controller & Venting Port - KSL-1200X-L-UL**



## SPECIFICATIONS

Structure	<ul style="list-style-type: none"> <li>• Thermal efficient ceramic (high purity alumina fiber) insulation surrounding the chamber provides maximum energy efficiency.</li> <li>• Heating elements on all three sides of the interior chamber for fast heating and enhanced temperature uniformity.</li> <li>• Heavy duty double layer structure with the cooling fan to keep furnace exteriors safe to touch.</li> <li>• Built-in vent port removes undesirable contaminants and moisture; extends the lifespan of the heating elements and furnace.</li> <li>• 1/4" Barbed Gas Inlet/Outlet installed on the back of the furnace</li> <li>• An <u>interlock</u> is installed to cut off power as soon as the door is open</li> </ul>
Chamber Dimensions	<ul style="list-style-type: none"> <li>• 16 " x 16" x 16" (D x H x W) (40x40x40 cm)</li> <li>• Capacity : 64 liters/ 4100 cubic-inches/ 2.37 cubic ft</li> <li>• Observation window of quartz ( 1/2" - 2" diameter ) is available upon request</li> </ul> <div style="display: flex; justify-content: space-around; align-items: center;">    </div>
Power	<ul style="list-style-type: none"> <li>• 7.5KW</li> <li>• Power cord supplied without plug</li> </ul>
Current Rating	34A
Voltage	AC 208 - 240 Single phase, 50/50Hz Note : Power cable included
Operating Temp Range 	<ul style="list-style-type: none"> <li>• 100-1100°C Max. continuously</li> <li>• 1200°C Max. under an hour</li> <li>• <b>Note:</b> for using =&gt;1000°C, furnace block must be placed front chamber,</li> <li>•</li> </ul>
Stability at 1000°C	+/- 1°C

Uniformity at 1000°C	+/- 5°C
Max. Heating Rate	20°C/ min
<b>Temperature Controller</b> 	<ul style="list-style-type: none"> <li>• <u>FA-YD518P-AG</u> temperature controller is included.</li> <li>• Proportional–integral–derivative control (PID control) and auto-tune function</li> <li>• 30 segments programmed with ramping, cooling and dwelling steps</li> <li>• Built-in over-temperature alarm and thermocouple failure alarm</li> <li>• +/- 1 °C temperature control accuracy</li> <li>• Default DB9 PC communication port</li> <li>• MET Certified</li> </ul>
<b>Temperature controller (optional)</b> 	<ul style="list-style-type: none"> <li>• MTS02-Y Temperature control software kit (for YD518P series controllers) + 15" laptop package is available at the options bar.</li> <li>• You may upgrade the temperature controller to the <u>Eurotherm 3504 Temperature Controller</u> which is fully compatible with LabVIEW. This package includes a Eurotherm 3504 programmer, a communication cable (RS485 - USB) and a software CD.</li> <li>• Eurotherm 3504 temperature controller.</li> </ul>
Furnace Weight	275 LB
Product Dimension	660mm L x 645mm W x 945mm H
Shipping Dimensions	<b>48" x 40" x 54"</b> (DxHxW)
Shipping Weight	<b>425 Lbs</b> (shipping by pallet)
Warranty	<ul style="list-style-type: none"> <li>• One year limited warranty with lifetime support.</li> </ul>
Compliance	<ul style="list-style-type: none"> <li>• <b>CE Certified</b></li> <li>• All electric components (&gt;24V) are UL / MET / CSA certified</li> <li>• The furnace is ready to pass TUV(UL61010) or CSA certification at extra cost</li> </ul>
Application Notes	<ul style="list-style-type: none"> <li>• For preserving the longevity of the furnace components, we recommend the heating rate not to exceed 10 °C /min.</li> <li>• The cooling rate shall also not exceed 10 °C /min.</li> <li>• This furnace lacks vacuum sealing, toxic or explosive gasses are not recommended for use with this furnace without necessary safety controls and supervision.</li> <li>• Small cracks may appear on the surface of the refractory ceramics over extended use.</li> <li>• This is a normal occurrence and the cracks may be repaired with <u>alumina coating</u>.</li> </ul>

**C173 U-BOX**



### Descripción

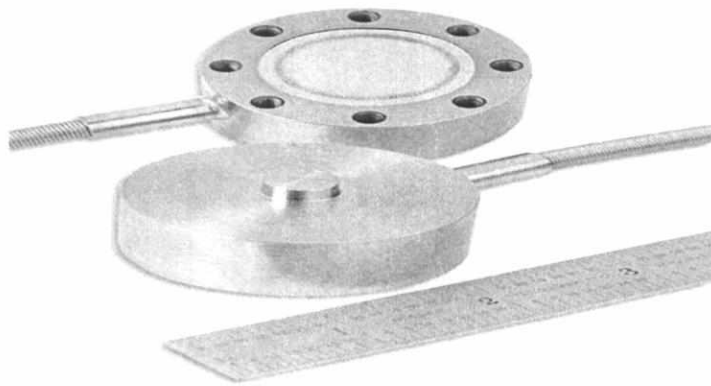
U-BOX, **stainless steel** made, with inside smooth walls, equipped of a flow obstacle formed by four vertical reinforcement bars.

The bars have dia.10 mm and the light between them is 35 mm. A gate in guillotine form splits the vertical portion of the box from the horizontal one.

Dimensions: 480 x 250 x 680 mm

Weight: 20 kg approx.

### Button Style Compression Load Cell, 0-100 N to 0-50 kN 51mm Dia. SS



### Description

OMEGA's LCM305 and LCM315 Series Load Cell is a heavy duty miniature (51mm dia.) compression load cell. Factory Mutual Intrinsically Safe rating is standard. Its small size and low profile make it ideal for test benches, prototype structures and industrial weighing applications. There are 8 x M5 mounting holes in the base of the load cell for locating it securely to the test

fixture or structure.

### **SPECIFICATIONS**

**Excitation:** 10 Vdc, 15 Vdc max

**Output:** 2 mV/V ( $\pm 0.25\%$ )

**Linearity:**  $\pm 0.15\%$  FSO

**Hysteresis:**  $\pm 0.1\%$  FSO

**Repeatability:**  $\pm 0.05\%$  FSO

**Agency Approvals:** FM IS/I.II.III/1/CDEFG – Standard

**Zero Balance:**  $\pm 2\%$  FSO

**Deflection:** 0.025 to 0.075 mm

**Operating Temp Range:**  $-46$  to  $107^{\circ}\text{C}$  ( $-50$  to  $225^{\circ}\text{F}$ )

**Compensated Temp Range:**  $16$  to  $71^{\circ}\text{C}$  ( $60$  to  $160^{\circ}\text{F}$ )

**Thermal Effects:** Zero:  $0.0045\%$  FSO/ $^{\circ}\text{C}$  Span:  $0.009\%$  FSO/ $^{\circ}\text{C}$

**Safe Overload:** 150% of Capacity

**Ultimate Overload:** 300% of Capacity

**Input Resistance:** 360 Ohms minimum

**Output Resistance:**  $350 \pm 10$  Ohms

**Protection Class:** IP65

**Construction:** Stainless Steel

**Electrical:** 3 m (10 ft) 4-conductor colour coded, shielded cable

**Dimensions:** Press "Specs" button below picture.

#### **PLACE ORDER**

- Button compression load cell with 0.25% Interchangeability for Scale Applications
- Rugged, Stainless Steel Construction
- Built-in Load Button for Easy Installation
- 5-Point Calibration Certificate Included
- FM Intrinsically Safe

**DIGITAL WEIGHING CONTROLLER LOAD-CELLS INDICATOR 1-4 LOAD CELL SIGNALS INPUT 2 RELAY OUTPUT 4 DIGITS LED DISPLAY**



The instrument provides isolated auxiliary power(regularly 5V/80mA) which allows 1-4 loadcells connection directly. Up to 6 outputs control are available for group ingredients weighing or fast/slow weighing; Data/Peak value holding function for choice.

**Features:**

High precision, steady performance and easy operation.  
Dual LED nixie tube digits for display, clear for reading.  
1-4 load cell signals input and 2 RELAY output alarms.  
The instrument has functions of clearing zero & PV modification.  
Work with various pressure sensor and weight sensor.  
Suitable for for weight control, auto accumulation/mean for up/down batch control, etc.

**Specifications:**

Model: LM8-RRD(4 Digits) / LH86-RRD(6 Digits) (Optional)  
Display: LED Display  
Power Supply: LM8-RRD: 220V/110V AC; LH86-RRD: 90-260V AC/DC  
Accuracy: LM8-RRD: 0.2%F.S $\pm$ 2dgt; LH86-RRD: 0.1%F.S $\pm$ 2dgt  
Power Consumption:  $\leq$ 5VA  
Sampling Rate: LM8-RRD:  $\leq$ 16 times/second; LH86-RRD: 16-128 times/second  
Input: Regular: mV(Load Cell), 1-4 pcs Load Cell  
Output: 2 RELAY  
Relay: Open Contract 250V AC 3A or 30V DC 3A COS $\phi$ =1  
Auxiliary Power: DC 5V  
Item Size: 95 \* 85 \* 46mm / 3.74 \* 3.35 \* 1.81in  
Item Weight: LM8-RRD: 258g / 9.12oz; LH86-RRD: 188g / 6.63oz  
Package Size: 11 \* 10 \* 5.5cm / 4.33 \* 3.94 \* 2.16in  
Package Weight: LM8-RRD: 294g / 10.4oz; LH86-RRD: 224g / 7.91oz

**Package List:**

1 \* Weighing Controller  
2 \* Bracket  
1 \* User Manual (English)  
Cube for concrete testing size (150mm x150mm x150mm) (Qty 40)  
Cube for mortar testing size (100mm x100mm x100 mm) (Qty 40)

- Cylinder for mortar testing size (100 mm x 200 mm) (Qty 40)
- Cylinder for concrete testing (150mm x 300mm) (Qty 40)
- Three gang mould 70x70x280 mm (5 sets)
- Three gang mould 25x25x280 mm (5 sets)
- ASTM sieves (02 sets)
- BS code sieves (02 sets)