

OFFICE OF THE BOARD OF COUNCILORS BASIRHAT MUNICIPALITY
Basirhat ,North 24 Parganas

NOTICE INVITING e-BID

Memo No.:- BM/ 916 /AMRUT /HC/2019-20

Dated: 02.07.2020

NIT No.- WBMAD/BASIR/E- 10/AMRUT/2019-20 (2nd call)

The Chairman, Basirhat Municipality, on and for behalf of the Board of Councillors of Basirhat Municipality invites sealed competitive e-Tender on item rate basis from reliable ,resourceful ,bonafide and experience Companies/ Firms/ Contractors having financial capability and sufficient technical credential for execution of said work of value not less than 30% of the tender value/Quantity in single contract within last five 5(Five) financial year from the date of NIT in any Government/Semi Government /Undertakings /Autonomous/ Local Bodies. The details noted below in Annexure -A the eligibility and depicted here under for participating in the e-Tender.

Sl. No	Name of the Work	Estimated Amount (Rs.)	Earnest Money (Rs.) / Tender Id or SL No.	Period of Completion
1	House Service Connection Upto Consumer premises with MDPE pipes of required dia. And necessary Accessories Complete in all Respect including Water Meter for 24500 nos. within Zone A, B, C, D, E & F within Basirhat Municipality under AMRUT.	Item Rate Tender	Initial Earnest Money – Rs. 10,00,000.00 (Rupees Ten lakhs only)	365 Days

2.	Earnest Money	<p>For NIE-T-</p> <p>a. 2% of the Quoted Bid price in two parts, viz Rs. 10,00,000.00 (Rupees Ten lakh only) as an initial Earnest Money Deposit shall accompany with Bid Proposal through online payment system (ICICI payment Gateway) in favour of the “Chairman, Basirhat Municipality,”</p> <p>Note- Earnest Money will be deposited by the bidder through the following payment mode as per Finance Department Order No. 3975-F(Y) dated 28th July, 2016 (Annexure – A) – i) Net banking (any of the banks listed in the ICICI Bank Payment gateway) in case of payment through ICICI bank payment gateway.</p> <p>b. EM Deposit i.e. 2% of bid amount beyond Rs. 10,00,000.00 (if any) shall have to be deposited after acceptance of Bid Proposal.</p>
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3.	Scope of Work:	<p>Work includes</p> <p>Providing Supply, Installation, Fittings, Fixing, Testing and Commissioning of House Water Supply Connections, with MDPE Pipe 20mm dia., & P.E. Compression EF fittings 20mm, Excavation, all short of Bituminous / Concrete Road Up to depth of D.I. Distribution Pipe line, Cuttings Fittings, Fixing, MDPE / P.E. pipe fittings up to Meter Box, inside/outside, to consumer premises average 12 mtrs, Including permanent restoration of the existing Bituminous / Concrete/Brick pavement /Paver Block road to its original condition , damages of Under Ground Drainage line, Electrical lines, Tele phone lines other water supply line, Crossing drain line through G.I. (Medium) Casing pipe Including Leakage Testing, supply of MDPE Pipes 20mm dia. PE 100, PN 16, 12 Mtrs. (Average), PE Both side Compression Elbow 90 deg. 2 nos. PE one side Compression other side SS insert F thread, Elbow 90 deg. 1 nos. P.E. Adopter with SS inserts M/F Thread-Compression 2 nos. PE Compression Ball Valve, (excess quantity of fittings should be provided as per site condition), 1 no. Ferrule of Gunmetal Confirming to IS 2692/1984 (reaffirmed 2005) 1 no. NRV 1no. P.E. Meter Box/ Cabinet with Common Lockable Key, Length 325mm, Width 245mm, Height 175mm. Suitable for Cover Meter, PVC Ball Valve, Back filling with Silver sand over Ferrule up to Road Level and also</p>
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		<p>remove surplus Earth from Road side, including Supply, Delivery, unloading and proper staking and proper installation at site of 15mm dia. Multijet type Water Meter 1 no. Must be AMR Computable, Class B, +/- 2%, IS 779 / ISO 4064, Admissible Pr. Max. 16 Kg/Cm² 360^o Orientable, Cybal Coumputable, Magnetic transmission drive, Cooper can Mineral Glass 5mm Thik Envelop, Extra dry Dial, Totalizer, Protection Class IP 68, Strainer Inbuilt, MID Certification Marked, Certificate and marking of weights and measures with Brass Nuts & Nipples</p> <p>Water Meter Typical Performance.</p> <p>i) Starting flow :- ≤10 L/Hr. ii) Accuracy from +/- 5% :- 30 L/Hr. iii) Accuracy from +/- 2% :- 120 L/Hr. iv) Max. Flow +/- 2% :- 3000 L/Hr.</p> <p>Vendor list approved by P.H.E.Dte. Vide no. 20110-125/80/1/2011 Dated 02.12.2011 of C.E. (Mechanical-Electrical) & Chairman of vendor enlistment Committee P.H.E. Dte.</p> <p>(Execution as per direction of EIC). fixing of meter as per direction of EIC. House Water Supply Connection Through 20mm dia. MDPE Pipes.</p> <p>Note:- Defect liability period will be as per Govt. Order bearing NO.G.O.No-5784-PW/L&A/2M-175/2017 date. 12.09.17</p>
4.	Refund of SD Money:	As per Govt Order Bearing No.G.O.No-5784-PW/L&A/2M-175/2017 date. 12.09.17
5.	Time of completion	Time of completion of the Contract is 365 calendar days from the date of issue of Work Order.

1. In the event of e-Filing intending bidder may download the tender document from the website directly by the help of Digital Signature Certificate.
2. In the event of online submission, both technical Bid (Part-I) and Financial Bid (Part-II) will be submitted concurrently duly digitally signed in the Website <http://wb.tender.gov.in>

3. Eligibility criteria for participation in tender:

- i. Tenderer must have physically completed at least one similar nature of works within the qualifying period i.e. in the last five financial years having 30 % number of connections with respect to BOQ provision in this tender.

OR

Tenderer with the experience of laying of pipe line having physically completed equivalent to 30% of the value of work in a single contract (Not less than Rs. 4.5 crore).

OR

Intending tenderers should produce credentials of 2(two) similar nature of completed work, each of the minimum value of 25 % of the estimated quantity/amount put to the tender (Not less than Rs. 3.5 Crore) during 5(five) years prior to the date of issue of the tender notice.

OR

Credential of one single running work of similar nature which has been completed to the extent of 75 % or more and the value of which is not less than the desired quantity/ value at (ii) above;
In case of running works, only those tenderers who will submit the certificate of satisfactory running work from the concerned Executive Engineer, or equivalent competent authority will be eligible for the the tender. In the required certificate it should be clearly stated that the work in progress satisfactorily and also that no penal action has been initiated against the executing agency, i.e. the tenderer.

The eligibility will be determined by the completion certificate supported with work order and price schedule of the work completed.

- II) Having annual turnover of equivalent to **7.00 crore** or above in any one year of last three Financial years.

- III) Tenderers should submit Bank Solvency Certificate of not less than **7.00 Crore** from their banker / bankers regarding financial capability. Certificate must issued within last 6(six) months prior to the date of issue of the tender notice [Non-Statutory Documents].
- IV) In case of Proprietorship and Partnership Firms and Company the Tax Audited Report to be furnished along with balance sheet.
- V) The intending tenderer will have to produce the following information / data / credentials / certificates etc. to the undersigned along with the prayer for obtaining permission to participate in the tender.
- Having valid G.S.T. Certificates with up to date return.
 - PAN Number etc.
 - Employees' PF and ESI Certificate from the competent Authority with up to date chalan.
 - Income Tax return receipts for the last financial year.
 - Professional Tax clearance receipt. (Up to date)

The documents as mentioned above will be examined in order to assess the eligibility of the applicant to participate in the tender. On being satisfied about the eligibility, part-II financial bid will be opened.

VI) Each Tenderer shall submit their tender offer marked Part-I and Part-II. The Part-I shall contain "TECHNICAL PART OF THE OFFER & COMMERCIAL TERMS" and Part-II shall contain "PRICE BID".

VII) Tenderer should quote their rates on each Item, both in figures and in words.

1. **Date & Time Schedule: -**

SI NO.	Particulars	Date and Time
1	Date of uploading of NIE-B. and Bid Documents online) (Publishing Date)	03.07.2020
2	Documents download/sell start date (Online)	03.07.2020 at 10.00 Hrs
3	Date of Pre-Bid Meeting with the intending bidders In the office of the Superintending Engineer, East Circle, Municipal Engineering Directorate, AB 30/1 , Prafullya Kanon, Kestapur, Kolkata 700101	09.07.2020 at 12.00 Hrs
4	Bid submission start date (On line)	03.07.2020 at 10.00 Hrs
5	Bid Submission closing (On line)	24.07.2020 at 18.00 Hrs
6	Bid opening date for Technical Proposals (Online)	27.07.2020 at 10.00 Hrs
7	Date of uploading list for Technically Qualified Bidders (online)	To be notified later
8	Date and Place for opening of Financial Proposal (Online)	To be notified during uploading of Technical Evaluation Sheet of Bidders
9	Date of uploading of list of qualified bidders along with the offer rates through (on line)	To be notified later.
10	Also, if necessary for further negotiation through offline for final rate.	To be notified later.

- The partnership firm shall furnish the registered partnership deed and the company shall furnish the Article of Association and Memorandum. [Non-Statutory Documents].
- Where there is a discrepancy between the rate in figures & words the rate in words will govern.
- Constructional Labour Welfare Cess @ 1 (one) % of cost of construction will be deducted from every progressive

bill. GST, Royalty & all other statutory levy / Cess will have to be borne by the contractor & the rate quoted by them should be inclusive of all the taxes & cess etc.

7. Earnest Money: 2% of the Quoted Bid price in two parts, viz. the requisite Earnest Money, as specified in this N.I.T shall be paid through online payment system in favour of the "Chairman, Basirhat Municipality," Balance Earnest Money Deposit if any shall be deposited after acceptance of Bid Proposal. Every such payment through online bank transfer shall be made on or after the date of publish of N.I.T. At the time of uploading the Tender, the intending Tenderer shall upload a scanned copy of such receipt of online payment along with his/her quotation. Any tender without document (Excepting exemption as per G.O.) shall be treated as informal and shall automatically stands cancelled.

Tender will be declared informal if earnest money is not submitted in prescribed form.

The original copy of the receipt etc. only in case of L1 Bidder towards Earnest Money will be submitted in sealed envelopes in the Office of the Chairperson, Board of Administrator, Basirhat Municipality, with his acceptance letter of the L1. Failure to submit the hard copy with the acceptance letter within the time period prescribed for the purpose may be construed as an attempt to disturb the tendering process and dealt with accordingly legally including blacklisting of the bidder.

8. **Security Deposit:** Balance amount of security deposit @ 8% (eight percent) will be deducted from each and every progressive bill to make 10% security deposit as per terms of the contract and the same will be refunded after expiry of the Defect Liability Period mentioned in Govt. Order Bearing No. G.O.No-5784-PW/L&A/2M-175/2017 date. 12.09.17.

9. No conditional/ incomplete tender will be accepted under any circumstances.

10. The Chairperson, Board of Administrator, Basirhat Municipality," reserves the right to cancel the N.I.T. due to unavoidable circumstances and no claim in this respect will be entertained.

11. During scrutiny, if it comes to the notice of the tender inviting authority that the credential or any other papers submitted are found incorrect / manufactured/fabricated, that tenderer will not be allowed to participate in the tender and that application will be out rightly rejected without any prejudice.


12. The tender inviting authority reserves the right to accept or reject any bids and to cancel the bidding process without assigning any reason whatsoever to the tenderer.

13. Qualification Criteria

The Tender Inviting & Accepting Authority through an 'Evaluation Committee' will determine the eligibility of each bidder, the bidders shall have to meet all the minimum criteria regarding: -

- a) Financial Capacity
- b) Technical Capability comprising of personnel & equipment capability (NIT Part-I)
- c) Experience

The eligibility of a bidder will be ascertained on the basis of the self-attested documents in support of the minimum criteria as mentioned in a, b, c above and the declaration executed through prescribed affidavit in non-judicial stamp paper of appropriate value duly notarized. If any document submitted by a bidder is either manufacture or false, in such cases the eligibility of the bidder / tenderer will be rightly rejected at any stage without any prejudice.


Chairperson
Board of Administrator
Basirhat Municipality
Chairperson
Board of Administrators
Basirhat Municipality

Memo No.:- BM/916/AMRUT/HC/2019-20/()

Dated: 02.07.2020

Copy forwarded for kind information to:

- 1) The State Mission Director, AMRUT,
- 2) The CEO, KMDA
- 3) The Secretary, MED
- 2) The Chief Engineer, MED
- 3) The Chief Engineer, KMDA, W & S, Unnayan Bhavan.
- 4) The Director, State Urban Development Authority,
- 5) The District Magistrate, North 24 Parganas District,
- 6) The Additional Chief Engineer (South) , MED
- 6) The Superintending Engineer, East Circle, MED-for information and taking necessary action.
- 7) The Executive Engineer, MED, North 24 Parganas Division.
- 8) The Assistant Engineer, MED , Basirhat Sub-Division.
- 9) The Executive Officer, Basirhat Municipality.
- 10) The Finance Officer, Basirhat Municipality.
- 11) The Nodal Officer, Basirhat Municipality, AMRUT.
- 12) Rajesh Bharati & Mihir Sarkar (S.A.E.), Basirhat Municipality,
- 13) Municipal Website : www.basirhatmunicipality.in

M. S. Sarkar
Chairperson
Board of Administrator
Basirhat Municipality
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Basirhat Municipality

GENERAL SPECIFICATIONS OF MATERIALS TO BE USED FOR HOUSE CONNECTIONS

DI Strap Saddle required for providing house service connections on DI/CI mains.

General specification:

Strap saddles shall be suitable for CI/DI pipes of nominal size 100 mm to 450 mm with nominal outlet connection size from 1/2", 3/4" & 1" BSP female thread.

The body shall be Resicoat @ epoxy coated with thickness >250 micron as per GSK standard & EN14901. The saddles shall be single type up to pipe sizes of NB 300 and service outlet of 1/2", 3/4" and 1" BSP female thread.

Fasteners shall be of threaded nut-bolt-washer type. Nut-bolts of size 1/2" (M12) shall be used. Saddle strap shall be with NBR protection rubber.

The sealing between the saddle and mains shall be obtained by using a profiled elastomeric seal matching to the curvature of the pipe. The seal shall be of NBR elastomeric type, suitable for all potable water applications.

The clamp saddles shall be suitable for online tapping with spatula & drilling tool, maximum working pressures up to 16 bars.

Material and Design Specifications

Saddle body : DI GGG40 with Resicoat@ epoxy (for corrosion protection of fittings) coating with length 172 mm, width 75 mm, height 67 mm & thread depth 24.5mm. The body shall have retaining cavity housing for internal and external retention of the elastomeric seal. Sealing shall be achieved by pressure exerted by the body while fastening the saddle straps & body on the pipe.

Saddle strap: Saddle straps shall be made of stainless steel 304 grade, gauge 16 & width 40mm to prevent corrosion over the long service life & should be with no weld joint to avoid inconsistency of strength.

Strap Protection Rubber: NBR UV protected Elastomeric (rubber) shall be such that none of the Stainless-Steel Strap is in direct contact with the pipe. It shall ensure a firm non slip grip mounting on the pipe due to external loading.

Saddle seal: It shall be virgin rubber NBR Class 70 complying with EN 682-2002. It shall be of type pressure activated hydro-mechanical design. It shall be contoured gasket to provide a positive initial seal which increases with increase in the line pressure. Gasket shall be, with the outlet section having o-ring contacting the saddle body.

Nuts – Bolts- Washer: Stainless Steel Type 304, NC rolled thread, Tightening torque for 1/2" (M12) nut-bolt: 14-15 kg m.

MDPE Pipe for House Service Connection:

Pipes shall be made out of MDPE raw materials and it must have WRc, KIWA approvals. The pipes shall be conforming to ISO: 4427, PN 16.

The pipes should have carried all mechanical and chemical properties in accordance to ISO: 4427 only.

Pipes should be suitable for electro fusion jointing and shall be flexible enough to hold the compression fittings.

All MDPE pipes shall be supplied in single length of 200 meters in coil form and both ends shall be covered by PE end as protection cap during transit.

Manufacturers test certificate along with raw materials manufacturer's test certificate is mandatory. Random inspection for pipe, fittings, water meter will be carrying out.


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Installation and Fusion Jointing

The fusion jointing process is to be carried out as per the procedure outlined in the DVS2202 standard, if not available equivalent standards acceptable to employer. A protocol for each fusion joint to be printed to ensure the joint process carried out is error free. The electro fusion machine shall have the facility to record & make print for each joint. The precautions & measures as mentioned by electro fusion fittings/machine manufacturer should be taken up rigorously while making the joints in the field. The related pipe jointing accessories such as rotary pipe cutter, Universal clamping tools, Pipe cleaners, Pipe peelers supplied by the same electro fusion fitting/machine supplier shall be used to ensure perfect jointing. The usage of tapping tools such as tapping keys, supplied by the same electro fusion fitting /machine supplier must be used to ensure perfect tapping of main lines. The piping system will be tested as per the guidelines given by ISO standard. The guideline shall be furnished by the supplier of electro fusion fittings, tools and machines.

Electro fusion Welding Machine

The electro fusion control unit shall be designed for use with electro fusion fittings of 40V. The unit shall operate in two modes, Automatic & Manual. The unit shall be complete with all accessories and shall have the following features as minimum.

All units are to be provided with a single push button start and have additional information recoverable.

The initial power supply to enable the control unit to function correctly for all fitting and saddle sizes up to nominal diameter 400 mm should not exceed 4 KVA.

The unit is to be designed with an automatic compensator so that it can fully operate within input tolerances of between 180 and 264 Volt, respectively 45 and 65 Hz.

The units are to operate with a stabilized fusion voltage.

The range of fusion voltage is to be between 39 and 40 volts.

The display shall be scratch-resistant, back-lit, be easily readable, have an adjustable contrast function and give relevant information such as:

- Recognition of fitting type, dimension and manufacturer
- Resistance of connected fitting
- A check-system prior to commencement of fusion process
- Actual running and final fusion time in seconds
- Primary voltage and frequency
- Ambient temperature.
- Individual fusion number and unit number
- Mode of data transfer
- Appropriate cooling time

A temperature sensor is to be provided.

The minimum operating range of ambient temperatures is to be between -10° and +45°C and the unit must be equipped with an external ventilator for continual operation.

The unit must be capable of recognizing and processing different manufacturer's products.

Adapter clips for 4 mm terminal pins are to be available.

An external memory bank must be able to record at least 450 fusion records and be easily accessible and exchangeable.

The complete control unit must be contained in one single housing and not exceed a maximum weight of 21 kilograms including all standard primary and secondary cables.

The supplier must be able to provide a full range of system software and data transmission accessories as applicable for data processing.

The ability to download fusion records from all memory systems via an RS 232 interface is to be provided.

A back-up internal reserve memory with override must to be provided.

The protection class of the unit shall be at least IP 65.

A lightweight transport box with internal document pocket is to be provided.

All control units must fulfil the Electro-Magnetic Compatibility regulations in accordance with the latest European standards.



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Specification

Operating Temperature Range (Min).	:	-10 to +45 Deg C
Operating Voltage Range (min)	:	190 V to 265 V, 40 to 70 Hz
Output Voltage	:	39 to 40 V
Enclosure Protection	:	IP 54 class1
Input Cable length	:	Minimum 3 meters
Output Cable length	:	Minimum 3 meters

TECHNICAL SPECIFICATIONS FOR COMPRESSION FITTINGS**90 DEG COMPRESSION ELBOW WITH METAL INSERT**

One end of the Metal threaded compression Elbow will be with Taper male threads & other end will have compression fitting suitable to connect to PE pipe. The Taper male threads will be pressure tight. Pressure rating will be PN16. Body, Nut and Thrust Ring will be injection moulded from Polypropylene and UV stabilized body & thrust ring black in colour, Nut blue in colour. Lip gaskets in Food safe Rubber (NBR) black colour must have a conical shape on inside of gasket for easy insertion of pipe & with two lips on bottom to guarantee good sealing. Use of O ring not permitted. Clamp ring material will be Poly-acetal (POM) white colour and shall not be connected to thrust ring. Male threaded part will be made of SS 304.

The product will be tested as per below

Type test	Standard
Dimensions of the threads	ISO 7/1
Tightness of the joints	ISO 3458
Tightness of the joints when subjected to bending	ISO 3503
Resistance to pull-out	ISO 3501
Internal under-pressure test	ISO 3459
Long term pressure test	ISO/DIS 14236

90 DEG COMP ELBOW with COMPRESSION JOINT BOTH ENDS

The Compression Elbows will have compression ends in both sides, so that PE pipes can be connected at both ends. Pressure rating will be PN 16.

Body, Nut and Thrust Ring will be injection moulded from Polypropylene and UV stabilized body & thrust ring black in colour, Nut blue in colour. Lip gaskets in Food safe Rubber (NBR) black colour must have a conical shape on inside of gasket for easy insertion of pipe & with two lips on bottom to guarantee good sealing. Use of O ring not permitted. Clamp ring material will be Poly-acetal (POM) white colour and shall not be connected to thrust ring. Product should be KIWA approved.

The product will be tested as per below

Type test	Standard
Dimensions of the threads	ISO 7/1
Tightness of the joints	ISO 3458
Tightness of the joints when subjected to bending	ISO 3503
Resistance to pull-out	ISO 3501
Internal under-pressure test	ISO 3459

FEMALE THREADED ADAPTER with METAL OFFTAKE

One end of the Female adaptor with metal off take will be with female threads & other end will have compression fitting suitable to connect to PE pipe. The Taper male threads will be pressure tight. Pressure rating will be PN16.

Body, Nut and Thrust Ring will be injection moulded from Polypropylene and UV stabilized body & thrust ring black in colour, Nut blue in colour. Lip gaskets in Food safe Rubber (NBR) black colour must have a conical shape on inside of gasket for easy insertion of pipe & with two lips on bottom to guarantee good sealing. Use of O ring not permitted. Clamp ring material will be Poly-acetal (POM) white colour and shall not be connected to thrust ring. Female threaded part will be made of SS 304. Product Should be KIWA approved.

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The product will be tested as per below

Type test	Standard
Dimensions of the threads	ISO 7/1
Tightness of the joints	ISO 3458
Tightness of the joints when subjected to bending	ISO 3503
Resistance to pull-out	ISO 3501
Internal under-pressure test	ISO 3459
Long term pressure test	ISO/DIS 14236

UPVC BALL VALVES (STOP TAP)

The U PVC ball Valves will have Compression end on one side to connect PE Pipes and female threading on the other side for connecting BSP threaded fittings or pipes. The product shall confirm to ISO 4422-4 Standards and pressure rating will be PN 16. The product should be suitable for use in drinking water for human consumption.

Body, Nut and Thrust Ring will be injection moulded from Polypropylene and UV stabilized body & thrust ring black in colour, Nut blue in colour Lip gaskets in Food safe Rubber (NBR) black colour must have a conical shape on inside of gasket for easy insertion of pipe & with two lips on bottom to guarantee good sealing. Use of O ring not permitted. Clamp ring material will be Poly-acetal (POM) white colour and shall not be connected to thrust ring.

The Compression Fittings & U PVC Ball Valves for drinking water applications should have undergone type test by WRc-NSF, U.K. according to BS 6920 and a certificate from either WRc-NSF or WRAS (Water Regulations Advisory Scheme) should be available evidencing this fact. Product should be KIWA approved.


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**SPECIFICATIONS FOR MULTIJET CLASS – B DOMESTIC/COMMERCIAL WATER
METERING SYSTEM (SIZE 15 mm to 25 mm)**

Sl. No.	Parameters	Specification
1	Meter Size and overall dimensions	Nominal diameter of the meters shall be 15mm, 20mm. & 25mm Meter threads, nominal flow rate, minimum length of threads on either side; overall dimensions shall be as per table 2 of IS 779 or Table 1 of ISO 4064-1.
2	Scope of Application	The meter will be used for the measurement of cold, chlorinated potable water.
3	Applicable Standards	The meter shall conform to both IS 779 and ISO (4064) standards with latest Amendments.
4	Meter Type	The meters shall be: Multi-jet Inferential meters Super dry dial Hermitically sealed Class B, 360-degree orientable totalizer
5	Protection class	IP-68 tantalizer
6	Accessories	The meter shall include the following accessories: <ul style="list-style-type: none"> • Two sets of Brush nut & Nipples. • The meter shall be supplied with a tubular strainer in the inlet of the water meter with at least 12 holes/cm²
7	Flow rate	Minimum, maximum and transition flow shall be as per relevant standards.
8	Accuracy Class	The accuracy of the meter shall be in accordance with ISO 4064 class B and IS 779 – 1194 and its latest amendments.
9	Pressure and Temperature	Pressure and Temperature shall be in accordance with ISO 4064 class B and IS 779 – 1194 and its latest amendments.
10	Pressure Loss	The pressure loss shall be in accordance with ISO 4064 class B, and IS 779 – 1194 and its latest amendments.
11	Seal	The meter shall be sealed by the manufacture before delivery and shall be provided with a hole for sealing the meter with the service line on the inlet and out let side of the meter.
12	Material	<p>All the materials used to construct/ manufacture customer meters shall confirm to Appendix B of IS 779 or clause 4.7 of ISO 4064-1. in particulars the following:</p> <ul style="list-style-type: none"> • Cap cover shall be made of engineering plastic. • Strainers shall be made of engineering plastic. • Impeller shall be made of Engineering Plastic. • Impeller shaft shall be either SS 07Cr18Ni9 of IS 6911 – 1992 • Materials which come in contact with the water supply shall withstand 2 ppm (parts per million) of chlorine residual in the water supply and shall be resistant to corrosion. • The water meter and accessories shall be manufactured from materials of adequate strength and durability. The materials, which come in contact with the potable water, shall not create a toxic hazard, shall not support microbial growth, and shall not give rise to unpleasant taste or discoloration in the water supply. However, the spindle and bearings inside the hydraulic chamber shall be made of polished stainless steel with hard metal tip and sapphire. • Furthermore, the internal pressure cup should overlap the meter body. The lower case of the meter shall be painted with thermal painting externally. The painting materials should be safe for human uses and not affect human health. The painting colour shall be blue. <p>Construction: Meter shall be as per clause 9 of IS 779 – 1994 or relevant clauses of ISO 4064-1. Each meter will be supplied with two cylindrical nipples or tail pieces with connecting nuts. Threads on the connection shall conform to latest version of IS 2643 (part 1 to3) or ISO 228-1. All meters shall be supplied with an easily removable tubular inlet strainer. The Seal & Sealing wires shall be rust proof material like engineering plastic.</p>

13	Mechanical Meter	<p>The Totalizer and Totalizer Shield: -</p> <ul style="list-style-type: none"> • The totalizer copper can mineral glass envelop, shall be designed in such a way that if the totalizer protective glass is broken for a reason or another the totalizer cannot be removed from its place. The totalizer protective cover shall be made of sturdy glass and shall have a thickness of not less than 5mm. Study glass is defined as the ability of the counter protection glass to withstand, without damage, <p>Totalizer: -</p> <ul style="list-style-type: none"> • It shall be of straight reading type • The totalizer shall register in cubic meter units • The totalizer shall be set at 0 (zero) • The totalizer shall consist of a row of minimum four on-line consecutive digits to read at least 9999 m³ as per ISO 4064 / IS 779 – 1994. • Another three digits or pointers shall register flows in litres and be of a red colour. • The totalizer or any part of it shall be capable of being repaired. • copper can mineral glass envelop • The totalizer should be of open type. • The totalizer must be suitable for test on an electronic test bench. • The protection class of the totalizer should be IP 68. • The totalizer should be prepared for remote reading. The remote reading feature must be able to be added without taking the meter from the pipe or dismantling the meter. <p>The totalizer shall be designed in such a way that if the totalizer Protective lens / material are broken for any reason; the totalizer cannot be removed from its place.</p> <p>The totalizer shall be: Copper can mineral glass envelop. It shall be set to Zero at the factory, excepting the volume registered while testing the meters at the factory.</p> <p>Hermetically sealed, extra dry type. It shall consist of a row of minimum four on-line consecutive digits to read at least 9999.99 (4+2 digits) m³ or KL as per ISO 4064 / IS 779 - 1994. It should be capable of 360 degree orientation for ease In reading.</p>
14	Impeller and Impeller Chamber	The pivot of the impeller should be guaranteed against any corrosion or damage for at least three years after the first installation. The impeller chamber shall be resistant to corrosion.
15	Meter Markings	<p>The water meter shall be marked with the following identifications:</p> <ol style="list-style-type: none"> a) Direction of water flow with an arrow indicating the direction. b) Trade mark and/or name of the Manufacture. c) The metrological class and on rate in m³ per hour. d) The Manufacture's Serial number of the meter permanently at fixed to the meter's upper or lower case. e) Property marking / printing over cap cover can be mentioned the name of concerned ULB if required. f) Year of manufacturing printed on the counter or engraved on the head ring.
16	Compatibility with the Water Meters	End units must have a robust structure that is as resistant as possible to vandalism. End units that are sealed, have an antenna, and are integral part of the water. The manner in which end units are installed must not cause any hindrance to reading the water meter scale. The scale must be readable in the same manner and convenience as prior to the installation of the end units.

17	Resistance to Weather Conditions	End units must be resistant to extreme weather conditions including the following: Temperatures ranging from -5°C to 50°C. Relative humidity from 5% to 95%. The level of resistance for end units must be IP68.
18	Resistance to Noise, Electrical and Radio Disturbances	Ability to operate in a noisy electrical environment with electromagnetic disturbances (EMI) Ability to operate in an environment with radio frequency interference (RFI) including those emanating from the activities of the communication system wavelength. Protection against current fluctuations and lightning according to international codes and requirements.
19	General Characteristics	End units must identify the movement of the dial and count the pulses, or identify the numbers absolutely. End units that read the water meter in a more precise manner - such as absolute encoder or absolute counter will constitute an advantage. Meters must have scan time ability that enables reading in a resolution of 1 liter in a 3/4" meter with a maximum output of 5,000 litres per hour. End units must be able to diagnose fluctuations in the dial as a result of fluctuations in the water flow. A system that performs this function by reading the movement of the dial/wheel that counts in two points (creating a pulse only when the dial/wheel passes over two points) will constitute an advantage. Reading at 3 points (enabling identification of backward flow) will constitute an additional advantage. Another advantage will be a more reliable reading method, such as an absolute counter or even more so, an absolute encoder. End units must identify backward flow and calculate the amount on the electronic counter (program) separately. End units that are installed on main lines must be able to identify flow in two directions (such as using 3 points in the rotation cycle of the counter dial/ wheel). Information logged in end units must include at least: The end unit ID number, The water meter ID number, Water meter reading/Current volume Parameters for integration into the communication network End units must include a time clock synchronized with the system clock (for a two-way end unit) and have data logging ability according to time intervals predetermined by parameters. End units must identify and report low battery power. End units must identify "small leaks" by continuous consumption over a long period of time (such as 5 hours).
20	Shipping Containers	The water meters shall be packed in corrugated carton boxes containing not more than twenty (20) meters each.
21	Test	The Manufacturer must carried out all test as specified in Clause No 12 of IS 779 – 1994 or relevant clauses of ISO 4064 (Part 1) or EC by a recognized testing authority. The Report of test shall be furnished in accordance with IS 6784 – 1984. However, the manufacturer / supplier is liable carry out Life Test testing authority like “Fluid Control Research Institute” at his own cost from the lot of supplied meters. Lot size is to be determined on the basis of Table 4 of IS 779 – 1994. On the basis of Test Result, manufacturer/supplier shall be liable to change defective meters or whole lots as the case may be at his own cost.
22	Marking	Each water meter shall be marked / embossed with the following information 1.Manufacture’s name or Trade Mark 2.Nominal size and class of water meter 3. Direction of flow of water on both sides of the body of water meter 4. Year of manufacture and serial number 5. BIS/ECC/ISO Certificate Marking
23	Shipping Containers	The water meters shall be packed in corrugated carton boxes containing not more than twenty (20) meters each.


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SPECIFICATION FOR HOUSE SERVICE CONNECTIONS

Before providing House Service Connections, Service Provider shall collect a list of authorized consumers from the client on monthly basis. / verbal After getting such list from the client / Service Provider shall have to identify each consumer at site and a notice shall have to be served by the Service Provider to each consumer at site and a notice shall have to be served by the Service Provider to each consumer at least 30 days in advance stating that new service connection shall be provided at their respective premises along with water meters. / Making holding list, In case of any difficulty to locate any consumers at site by the Service Provider, client representative shall have to be accompanied with the service provider to locate the client at site of all the meters.

Location of placing water meters shall have to be mutually decided by the service provider and the consumer. No meters shall be installed inside, bath room / wash room / toilets / bed room / dining hall or any other rooms. Meter shall have to be installed in such a location that it can be easily accessed in side consumer premises.

All the damages made on the compound wall for providing service connection shall have to be restored by the Service Provider. Any damages made on the floor / PCC / tiled / mosaic etc. shall be restored by the Service Provider with Plain Cement Concrete (PCC) and neat cement finish. No tiles / mosaic shall be replaced by the Service Provider.

Service Provider shall not be responsible to connect a new service connection with the existing network of the consumer (inside the premises) for which consumer shall have to be made his own arrangement.

One no. ball valve to be provided on the upstream & one No. NRV shall have downstream of the meter and Cover with PE meter box.

Downstream side of the meter shall have to be connected to their existing line and maintained by the consumer. During installation of water meter, it shall be sealed against installation by the Service Provider.

If any drain is available on the periphery of the consumer premises then a G.I. (Medium) casing pipe shall have to be provided by the Service Provider. All the excavation and back filling trenches made for providing the Service.

Before starting job at site for providing House Service Connection, Service Provider shall impart training to all employees on following subject:

- Safety Awareness
- Environment Management System Awareness
- Customer Orientation
- Safe working procedure

Once above trainings are imparted then schedules are prepared and following actions shall be taken:

- Housekeeping Plan of the job,
- Job Safety Plan
- Method statement
-

Installation of Domestic Meter:

- Location of water meters shall have to be finalized in consultation with consumers.
- MDPE / HDPE pipe shall have to be laid in the trench with sand cushion inside the trench
- In case of stone / concrete surface MDPE / HDPE pipe shall have to laid with clamps at interval of 750 mm c/c
- Water Meters shall have to be installed as per manufacturer specification.
- After installation of water meters sites are to be restored to its original condition.
- After installation of water meters records are to be maintained in the standard form,
- Information related to Water Meter Installations shall have to be handed over to client
- Check list for providing House Service Connection shall have to be prepared by the Service provider and the same has to be filled up properly after completion of the job and signature shall have to be obtained from the respective authority / person. Feedback Form shall have to be designed by Service Provider and necessary feedback of consumer shall have to be recorded properly

INSTRUCTION TO BIDDERS

SECTION – A

1. General guidance for e-Tendering: -
Instructions/ Guidelines for tenders for electronic submission of the tenders online have been annexed for assisting the contractors to participate in e-Tendering.
 2. Registration of Contractor: -
Any contractor willing to take part in the process of e-Tendering will have to be enrolled & registered with the Government e-Procurement system, through logging on to <https://wbtenders.gov.in>. The contractor is to click on the link for e-Tendering site as given on the web portal.
 3. Digital Signature certificate (DSC):-
Each contractor is required to obtain a class-II or Class-III Digital Signature Certificate (DSC) for submission of tenders, from the approved service provider of the National Information's Centre (NIC) on payment of requisite amount details are available at the Web Site stated in Clause 2. DSC is given as a USB e-Token.
 4. The contractor can search & download NIT & Tender Documents electronically from computer once he logs on to the website mentioned in Clause 2 using the Digital Signature Certificate. This is the only mode of collection of Tender Documents.
 5. Submission of Tenders: General process of submission:
Tenders are to be submitted online through the website stated in Cl. 2 in two folders as per tender schedule, one is Technical BID (Part-I) & the other is Financial BID (Part-II) before the prescribed date & time using the Digital Signature Certificate (DSC).The documents are to be uploaded virus scanned copy duly Digitally Signed. The documents will get encrypted (transformed into non readable formats).
- (A) TECHNICAL PROPOSAL
The Technical proposal to be submitted in the following two covers (Folders):
- (A-1) Statutory Cover Containing:
Following Scanned Documents are to be uploaded virus scanned and digitally signed by the Bidder: -
- (a) N.I.T.
 - (b) Technical Documents
 - (c) Municipal Tender Form (No rates to be given)
 - (d) Vendor List
 - (e) Prequalification Forms (Section-B, Form-I)
 - (f) Scanned copy of EMD

[Note: At the time of submission of technical bid (online), bidders eligible for exemptions of EMD have to select exempted: yes and then upload the undertaking / exemption G.O.]

(A-2). Non-Statutory Cover Containing:

Following Scanned Documents are to be uploaded virus scanned and digitally signed by the Bidder: -

- (a) G.S.T. Registration with Up to date return Certificate.
- (b) Employees' PF & ESI Certificate with up to date chalan.
- (c) Income Tax Acknowledgement Receipt for last assessment year as per last audited financial year.
- (d) Affidavit (Declaration by the Bidder).
- (e) Trade License, Labour License Certificate etc.
- (f) Registration Certificate under Company Act. (If any).
- (g) Registered Deed of Partnership Firm / Article of Association & Memorandum.
- (h) Power of Attorney (For Partnership Firm / Private Limited Company, if any).
- (i) Audited Balance Sheet & Profit & Loss A/c for last three Financial Year.
- (j) Experience Certificate for completion of similar nature of work.
- (k) Scanned copy of Original Credential Certificates.

Intending Bidders should upload Non-Statutory documents as per following folders in My Document:

Sl. No.	Category Name	Sub Category Description	Details	Remarks
A	CERTIFICATES	CERTIFICATES	1.G.S.T. Certificates. 2. Income Tax Acknowledgement Receipt. 3. Employees' PF & ESI Certificates.	
B	COMPANY DETAILS	COMPANY DETAILS-I COMPANY DETAILS-II	1. Proprietorship Firm (Trade License) 2. Partnership Firm (Partnership Deed, Trade License). 3. Ltd. Company (Incorporation Certificate, Trade License) 4.Power of Attorney 5.Society (Society Registration copy, Trade License)	
C	CREDENTIAL	CREDENTIAL-1	1.Similar Nature of Work Done or as specified above. 2. Completion Certificate	
D	DECLARATION	DECLARATION	1. Corrigendum and Addendum (if any) 2. Additional Document If Any	
E	EQUIPMENT			
F	FINANCIAL INFO	WORK IN HAND		
	2016-2017	PAYMENT CERTIFICATE 1 PAYMENT CERTIFICATE 2	1. balance Sheet (With Annexure and 3CD Form in case of Tax Audit)	
	2015-2016	P/L AND BALANCE SHEET	1. balance Sheet (With Annexure and 3CD Form in case of Tax Audit)	
	2014-2015	P/L AND BALANCE SHEET	1. balance Sheet (With Annexure and 3CD Form in case of Tax Audit)	

G	MANPOWER	TECHNICAL PERSONNEL	1. List of Technical Staffs along with Structure of the Organization.	
		TECHNICAL PERSONNEL ON CONTRACT		

Note: -Failure of submission of any of the above-mentioned documents (as stated in A1 & A2) will render the tender liable to summarily rejected for both statutory & non statutory cover.

All Corrigendum & Addendum Notices, if any, have to be digitally signed & uploaded by the Bidder in the Declaration Folder of My Documents.

(B) Financial Proposal (Pat-II):

The financial proposal should contain the following documents in one cover (folder) i.e. Bill of quantities (BOQ) the contractor is to quote the rate online through computer in the space marked for quoting rate in the BOQ. Only downloaded copies of the above documents are to be uploaded virus scanned & Digitally Signed by the contractor.

5.1. Submission of Earnest Money:

2% of the Quoted Bid price in two parts, vice the requisite Earnest Money, as specified in this N.I.T shall be paid through online internet bank transfer on any Nationalized Bank/Scheduled Bank in favour of the Chairman, Basirhat Municipality payable at Basirhat, North 24 Parganas. Balance Earnest Money Deposit if any shall be deposited after acceptance of Bid Proposal. Every such every such payment shall be made through online internet bank transfer on or after the date of publish of N.I.T. At the time of uploading the Tender, the intending Tenderer shall upload a scanned copy of such receipt of online payment along with his/her quotation.

6. Opening & evaluation of tender: -

Opening of Technical proposal

i. Technical proposals will be opened by the Chairperson, Board of Administrator, Basirhat Municipality, along with Directorate or his authorized representative electronically from the web site using their Digital Signature Certificate.

ii. Intending tenderers may remain present if they so desire.

iii. Cover (folder) statutory documents (vide Cl. No. 5.A-1) should be open first & if found in order, cover (Folder) for non-statutory documents (vide Cl. No. – 5.A-2) will be opened. If there is any deficiency in the statutory documents the tender will summarily be rejected.

iv. Decrypted (transformed in to readable formats) documents of the non- statutory cover will be downloaded & handed over to the tender evolution committee.

Uploading of summary list of technically qualified tenderers

i. Pursuant to scrutiny & decision of the Superintending Engineer, East Circle, MED/Executive Engineer, North 24 Parganas Division, MED. The summary list of eligible tenderers will be uploaded in the web portals.

ii. While evaluation the Superintending Engineer, East Circle, MED/Executive Engineer, North 24 Parganas Division, MED may summon the tenderer & seek clarification / information or additional documents or original hard copy of any of the documents already submitted & if these are not produced within the stipulated time frame, their proposals will be liable for rejection.

Financial proposal

- i. nancial proposals of the tenderers declared technically eligible by the Superintending Engineer, East Circle, MED/Executive Engineer, North 24 Parganas Division, MED will be opened electronically from the web portal stated in Clause 2 on the prescribed date, by the Chairman, Basirhat Municipality,
- ii. The encrypted copies will be decrypted and the rates will be read out to the contractors remaining present at that time.
- iii. However, if there is any scope for lowering down of rates, further negotiation meeting with the lowest bidder may be held at the office of the Chairperson, Board of Administrator, , Basirhat Municipality on recommendation of Superintending Engineer, East Circle, MED/Executive Engineer, North 24 Parganas Division, MED and it will be done offline. The final negotiation statement shall be uploaded in the website.
- iv. The Financial Proposal shall be evaluated by the Chairperson, Board of Administrator, , Basirhat Municipality for scrutiny and approval on recommendation of Superintending Engineer, East Circle, MED/Executive Engineer, North 24 Parganas Division, MED and/or Technical Committee as applicable. Final summary result containing inter-alia, name of contractors and the rates quoted by them shall be uploaded provided he is satisfied that the rate obtained is fare and reasonable and there is no scope of further lowering down of rate.

7. Award of contract: -

The tender accepting authority reserves the right to accept or reject any Bids and to cancel the Bidding processes and reject all Bids at any time or distribute the work prior to the award of Contract without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders on the ground for tender accepting authority's action. The Bidder who's Bid has been accepted will be notified by the Tender Inviting & Accepting Authority through acceptance letter. The notification of award will constitute the formation of the Contract. The Agreement in W.B.F. No.-2911(ii) will incorporate all agreements between the Tender Accepting Authority and the successful Bidder.

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Basirhat Municipality**

regard to dimensions and tolerances with this standard. A study of the detailed assembly shall also be made. The meter shall then be reassembled and reports shall be made on matters, such as ease of assembly, assembled and absence of riveted or turned over parts, forced fitting and liability of parts to break during dismantling and assembly.

12.4.4 Life Test (Accelerated Endurance Test)

The two unopened meters shall then be subjected to the life test as prescribed in IS 6784 : 1984.

12.4.4.1 After the meters have undergone the life test, they shall again be subjected to tests described under 12.4.1 and 12.4.2. They shall be deemed satisfactory if their performance after the life test satisfies the requirements given in 12.4.1 and 12.4.2.

12.4.4.2 One of the meters which have undergone the life test (preferably the one that has shown greater deterioration in its performance under the flow test) shall be dismantled completely and examined with a view to ensuring that there is no undue wear or distortion. Particular attention shall be paid during examination to the wear of the actuating unit comprising vane wheel or piston, the impeller shaft and measuring

chamber, bearings, gears and pinions, pivots and the gland packing.

12.5 The report of tests shall be furnished in accordance with IS 6784 : 1984.

13 MARKING

13.1 Each water meter shall be marked/embossed with the following information:

- a) Manufacturer's name or trade-mark,
- b) Nominal size and class of water meter,
- c) Direction of flow of water on both sides of the body of water meter, and
- d) Year of manufacture and serial number.

13.2 BIS Certification Marking

Water meter may also be marked with the Standard Mark.


13.2.1 The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. Details of conditions under which a licence for the use of the Standard mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

ANNEX A

(Clause 2)

LIST OF REFERRED INDIAN STANDARDS

IS No.	Title	IS No.	Title
292 : 1983	Leaded brass ingots and castings (<i>second revision</i>)	2643	Dimensions for pipe threads for fastening purposes:
318 : 1981	Leaded tin bronze ingots and castings (<i>second revision</i>)	(Part 1) : 1975	Basic profiles and dimensions (<i>first revision</i>)
319 : 1989	Free cutting brass bars, rods and sections (<i>fourth revision</i>)	(Part 2) : 1975	Tolerances (<i>first revision</i>)
320 : 1980	High tensile brass rods and sections (other than forgings stock) (<i>second revision</i>)	(Part 3) : 1975	Limits of sizes (<i>first revision</i>)
410 : 1977	Cold rolled brass sheet, strip and foil (<i>third revision</i>)	4131 : 1967	Nickel copper alloy castings
531 : 1981	Leaded brass strip for instrument parts (<i>second revision</i>)	4905 : 1968	Methods for random sampling
1264 : 1989	Brass gravity die castings (ingots and castings) (<i>third revision</i>)	6603 : 1972	Stainless steel bars and flats
2267 : 1972	Polystyrene moulding materials (<i>first revision</i>)	6784 : 1984	Methods for performance testing of water meters (domestic type) (<i>first revision</i>)
		6911 : 1992	Stainless steel plate, sheet and strip (<i>first revision</i>)
		7328 : 1992	High density polyethylene materials for moulding and extrusion (<i>first revision</i>)


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12.2.2 Acceptance Test**12.2.2.1 Lot**

In any consignment all the water meters of the same size and class manufactured by the same firm under similar conditions of production from material of the same batch, components from the same source, etc, shall be grouped together to constitute a lot.

12.2.2.2 The samples of water meters from a lot shall be selected at random or by random selection. The procedure for simple random sampling or systematic sampling as given in IS 4905 : 1968 may be adopted.

12.2.2.3 Scale of sampling

The first sample size of water meters from a lot shall be selected in accordance with col 1 and 2 of Table 4. Each meter in the sample shall be subjected to acceptance tests. If a decision to accept or reject the lot on the basis of first sample is not possible (see 12.2.2.5), the second sample of water meter shall be taken from the same lot in accordance with col 1 and 5 of Table 4 and each meter of the second sample shall be subjected to acceptance tests.

12.2.2.4 Any sample of water meter failing in any one or more of the acceptance tests shall be considered as a defective for the purpose of 12.2.2.1.

12.2.2.5 Criteria for acceptance

If in the first sample, the number of defective meters is less than or equal to the corresponding acceptance number a_1 as given in col 3 of Table 4, the lot shall be declared as passing the acceptance tests. If the number of defective meters is greater than or equal to the corresponding rejection number r_1 given in col 4 of Table 4, the lot shall be declared as not passing the acceptance tests. If the number of defectives is greater than the acceptance number a_1 but less than the rejection number r_1 , the second sample of size equal to that

of the first sample shall be taken and subjected to acceptance tests. The number of defective meters found in the first and the second sample shall be added and if the cumulative number of defectives thus obtained are less than or equal to the acceptance number a_2 given in col 7 of Table 4, the lot shall be declared as passing the acceptance tests, otherwise it shall be rejected.

12.3 Production Routine Tests

Production routine tests shall consist of:

- Pressure tightness (see 10.1);
- Loss of pressure (see 10.2);
- Metering accuracy (see 11.1); and
- Minimum starting flow (see 11.2).

12.4 Type Tests

The type tests shall comprise and be carried out in the following order.

12.4.1 Pressure Tightness Test

All the three meters shall be subjected to the hydrostatic test (see 10.1).

12.4.2 Flow Test

All the three meters shall then be subjected to the flow test to measure the following:

- Pressure loss (see 10.2)
- Metering accuracy (see 11.1)
- Minimum starting flow (see 11.2), and
- Temperature suitability (see 10.3).

NOTE - Before the meter is subjected to the flow test, it shall be brought to normal condition by passing through it water at nominal flow rate for a period of two hours.

12.4.3 Construction

One of the three meters shall be dismantled completely to its component parts and checked for conformity with

Table 4 Sample Size and Criteria for Acceptance
(Clauses 12.2.2.3 and 12.2.2.5)

Size of the Lot	Size of First Sample	Acceptance Number	Rejection Number	Size of Second Sample	Size of Cumulative Sample	Cumulative Acceptance Number
(1)	(2)	(a_1)	(r_1)	(if required)	(6)	(a_2)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Up to 50	5	0	1	-	-	-
51 to 150	13	0	2	13	26	1
151 to 280	20	0	3	20	40	3
281 to 500	32	1	4	32	64	4
501 to 1 200	50	2	5	50	100	6
1 201 to 3 200	80	3	7	80	160	8