



An ISO 9001
Company

Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)

Tiruchirappalli – 620014, TAMIL NADU, INDIA

CAPITAL EQUIPMENT / MATERIALS MANAGEMENT

ENQUIRY

NOTICE INVITING TENDER

Phone: +91 431 257 4237
Email : spsy@bheltry.co.in
Web : www.bhel.com

TWO PART BID	Enquiry Number:	Enquiry Date:	Due date for submission of quotation:
Tender to be submitted in two Parts	2631700072	28.10.2017	22.11.2017

You are requested to quote the Enquiry number date and due date in all your correspondence. This is only a request for quotation and not an order.

Please note that under any circumstances both delayed offer and late offers will not be considered. Hence vendors are requested to ensure that the offer is reaching physically our office before 14.00 hrs on the Date of tender opening.

Item	Description	Quantity
10	Electrically Operated Rice Boiler as per the technical specification & commercial conditions applicable (to be downloaded from web site www.bhel.com or https://eprocure.gov.in)	2 Nos.

Important points to be taken care during submission of offer

1. Delivery terms shall be FOR BHEL Stores, Trichy for indigenous vendors and CFR Chennai Airport / Seaport for foreign vendors.
2. Compliance Form No: TRY/IND/08 to be filled and enclosed along with the offer failing which, the offer will not be considered for evaluation.
3. Delivery period required is 3 months including pre-despatch inspection.
4. Erection and commissioning shall be done at BHEL Trichy by the supplier
5. Time period required for Erection and Commissioning shall be 3 weeks from the date of intimation by BHEL
6. EMD Not applicable.
7. All updates, amendments, corrigenda, etc., (if any), for each tender will be posted only on the above websites from time to time, as and when required, until each tender is opened. There will be no publication of such updates, amendments, corrigenda, etc., through newspapers or any other media.

BHEL's General guidelines / instructions compliance form and technical specification can be downloaded from BHEL web site <http://www.bhel.com> and <https://eprocure.gov.in> (public sector units > Bharat Heavy Electricals Limited page) under Enquiry reference "2631700072".

Tenders should reach us before 14:00 hours on the due date
Tenders will be opened at 14:30 hours on the due date
Tenders would be opened in presence of the tenderers who have submitted their offers and who may like to be present

Yours faithfully,
For BHARAT HEAVY ELECTRICALS LIMITED


S. PARTHASARATHY
MANAGER
CAPITAL EQUIPMENT / MM
BHEL, TRICHY-620014.
Manager / Capital Equipment / MM

PART-A
QUALIFYING CRITERIA FOR ELECTRICALLY OPERATED RICE
BOILER

S. NO	BHEL SPECIFICATION	VENDOR'S OFFER
1.0	QUALIFYING CRITERIA	
1.1	Only those vendors (OEMs),Who have manufactured, supplied and commissioned at least ONE ELECTRICALLY OPERATED RICE BOILER OF 25KG CAPACITY OR MORE , in the last ten years [as on date of this tender opening (first date)] should quote.	
1.2	Vendor has to submit Purchase Order document (PO) and Invoice as a documentary proof for the supply of the above mentioned Rice boiler. Vendor to provide the contact details of the customer (Name, Mail id, Telephone number etc) to whom they have supplied.	
1.3	BHEL reserves the right to verify the information provided by the vendor. In case the information provided by vendor is found to be false/incorrect, the offer shall be rejected.	

2.0	INFORMATION TO BE PROVIDED BY VENDOR	
2.1	Vendor shall provide contact details (phone no & email id) including the address of his Agents/Service centres in India.	
2.2	Number of “ Electrically operated rice boilers ” supplied and commissioned till date of 25kg capacity or more	
2.3	The BIDDER/VENDOR to furnish Reference list of customer including contact details (phone no & email id).	
2.4	Supplier to furnish the details of the Electrically operated rice boilers to BHEL Units if any along with PO copy/references.	

Part-B

**TECHNICAL SPECIFICATION FOR
ELECTRICALLY OPERATED RICE BOILER**

BRIEF DESCRIPTION:

Electrically operated rice boiler is required to cook the rice.

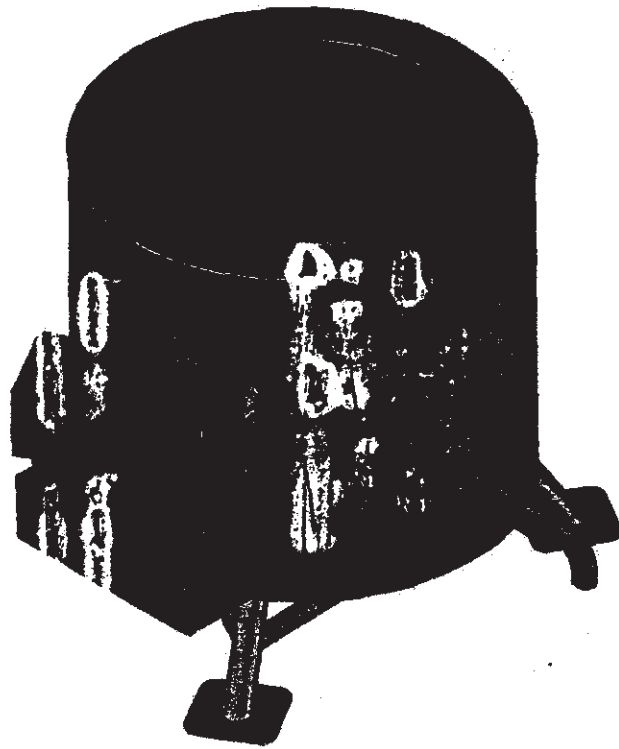
SL NO	DESCRIPTION	BHEL REQUIREMENT	Vendors Offer
1.0 Purpose			
1. 1	Purpose	To cook the rice	
1. 2	capacity	150 litre volume capacity to be provided. Maximum 25kg rice to be cooked within 50 minutes.	
2.0 Input supply			
2.1	Input supply	BHEL will provide $415 \pm 10\%$ V, $50 \pm 3\%$ Hz. 3 Phase AC, 3 - Wire System. (No neutral) near to the boiler at one point. All cables and further electrical tapping's etc. from this point is in supplier scope	
3.0 Machine Configuration & Construction			
3.1	Main components	The Rice boiler should have the following main components: - Outer and inner vessels - Filter for water and rice- inside the vessel - Drain pipe for water - Heating elements with ceramic supports - Insulation - Stand	
3.2	Vessel	Minimum two vessels of SS material to be provided. - Inner vessel should be removal type for easy maintenance. Minimum 2mm thickness and 650 mm dia - Outer vessel can be around 870 mm dia with minimum 2 mm thickness. It should be a double walled vessel. The construction of insulation between inner wall and outer wall of the outer vessel shall be with ceramic fiber blanket/wool of suitable thickness and density in order to avoid excess skin temp. The inner vessel can be supported on the periphery of the outer vessel by using a rope at the top of the periphery.	
3.3	Filter	Removable type Filter (convex shape) for rice and water separation inside the inner vessel to be provided. Material should be of stainless steel with proper holes of 2mm at regular intervals. Handle for lifting the filter to be provided.	
3.4	Drain pipe	The filtered water should be drained by using a drain pipe provided at the bottom of the inner vessel. The	

		drain pipe should have ball valve for controlling the flow.	
3.5	Heating elements	• Make: Kanthal or equivalent. Vendor to specify • Material: Nicrothal 80 or better. Vendor to mention wire dia • No. of heating coils: Vendor to specify • Length and dia of the heating coils: vendor to specify. • Total KW rating: Minimum 10.5 KW • Heating elements can be provided at the bottom of the boiler. • Provision to change the heating elements to be provided for maintenance purpose. • Proper supports and ceramics to be provided for holding the heating elements in position • All cables should be insulated properly to avoid melting/short circuit. Vendor to provide the details of the sleeves/insulation for cables	
3.6	Insulation	Proper insulation to be provided in the outer vessel to restrict the skin temperature as indicated in clause 3.2. Vendor to provide the details of the insulation like Material and thickness etc. Minimum 70mm thickness of insulation to be provided.	
3.7	Stand	Proper stand at the bottom of the boiler to be provided. Stain less steel material of around 10mm thickness	
3.8	Lid	Proper closing lid at the top with handle to be provided. SS material to be used	
3.9	Electrical terminal box	• Electrical terminal box to be provided with easy accessibility • Hinged protective cover shall be provided for the terminal box opening for ease of maintenance. • Water entry should be avoided into the electrical heating element area.	
3.10	Engraving	Engraving or Name plate mentioning “ BHEL CANTEEN ; Capacity and KW rating” to be provided	
4.0	Spares	One complete set of heating element to be provided along with each boiler.	
5.0	GA Drg/Sketch	Vendor to provide the GA drg/ sketch clearly mentioning the sub assembly parts, Bill of materials, Electrical heating element drg, control circuit along with offer for evaluation. Without these drgs the offer is liable for rejection	
5.1	Drg Approval	Vendor to provide the final GA drgs within 10 days from the date of ordering for BHEL approval in case of ordering.	

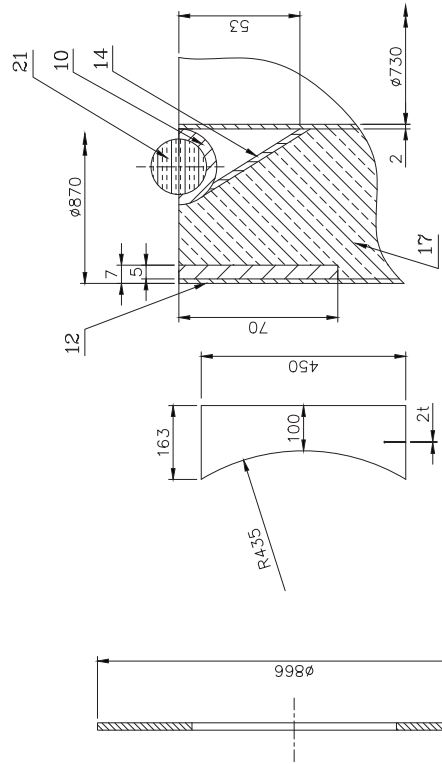
6.0	Pre dispatch Inspection	Vendor to inform BHEL for pre dispatch inspection at their works before dispatch	
7.0 Installation and prove out			
7.1	Installation & Performance prove out at BHEL	Installation & performance prove out has to be done at BHEL Trichy by the supplier. Rice will be provided by BHEL during prove out at BHEL works.	
8.0 Training			
8.1	Training	Vendor to provide training at BHEL Trichy at the time of commissioning	
9.0 Guarantee			
9.1	Guarantee	12 months from the date of commissioning for the entire equipment	

Note: BHEL drg is enclosed for understanding purpose only as annexure. Vendor to provide their conceptual GA drgs along with offer for evaluation.

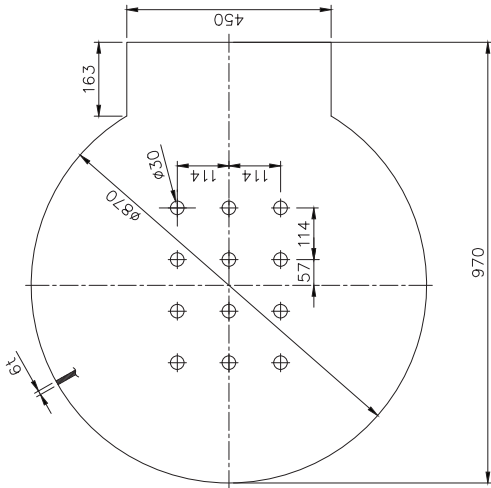
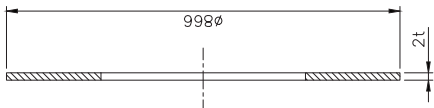
ELECTRIC RICE BOILER



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DETAIL — 'D'



DCN REF	
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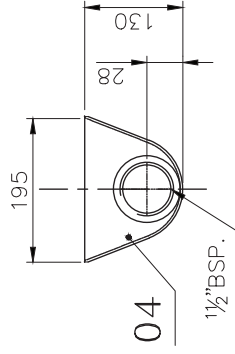
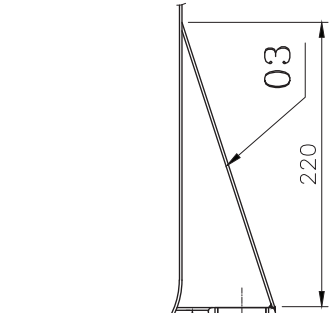
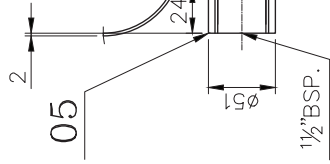
NOTE: —

ALL WELDED CONSTRUCTIONS

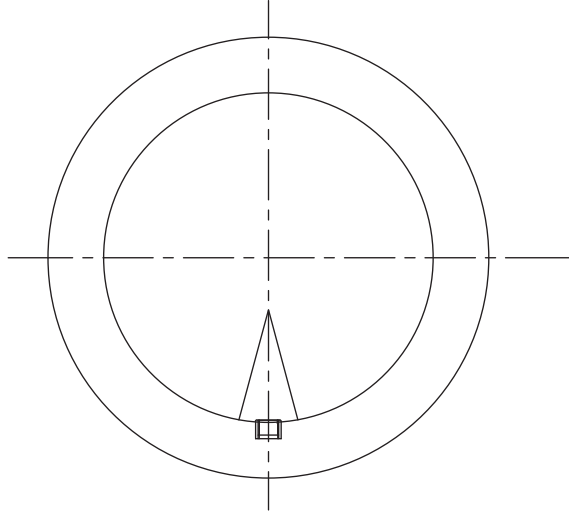
ITEM NO:10 PIPE TO CUT HALF

1	ASBESTOS ROPE #28x2400L																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	</
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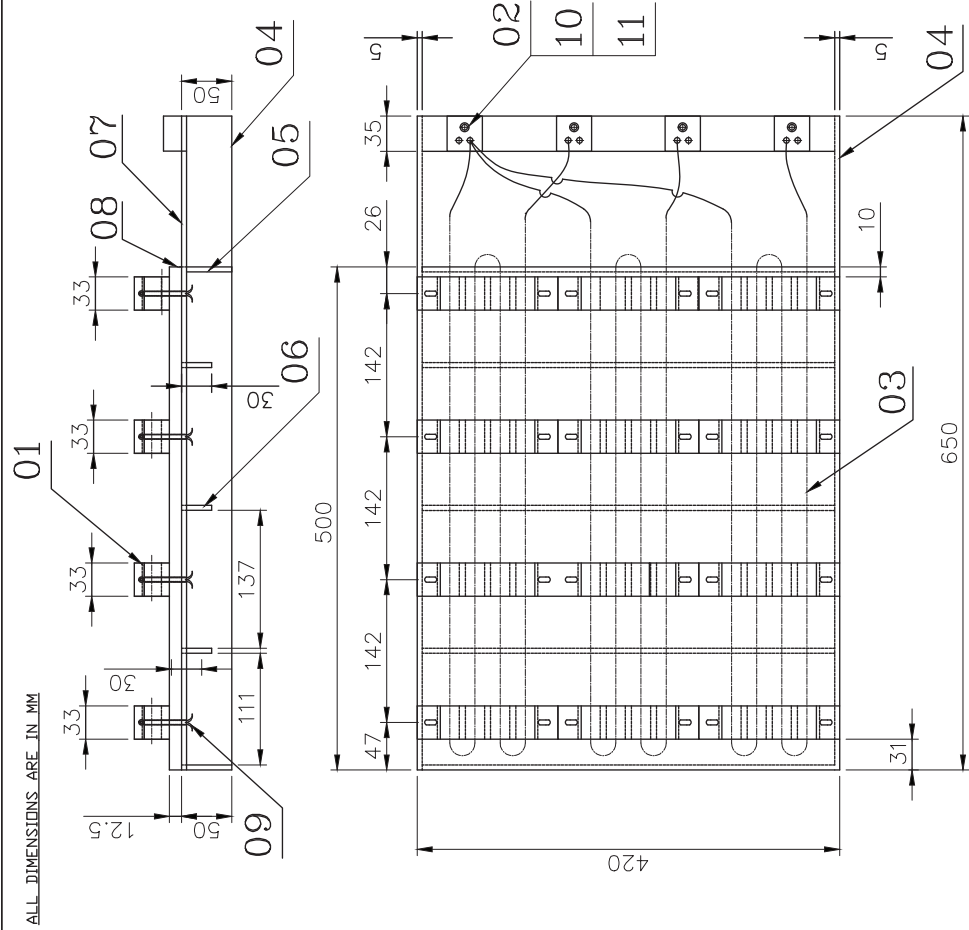


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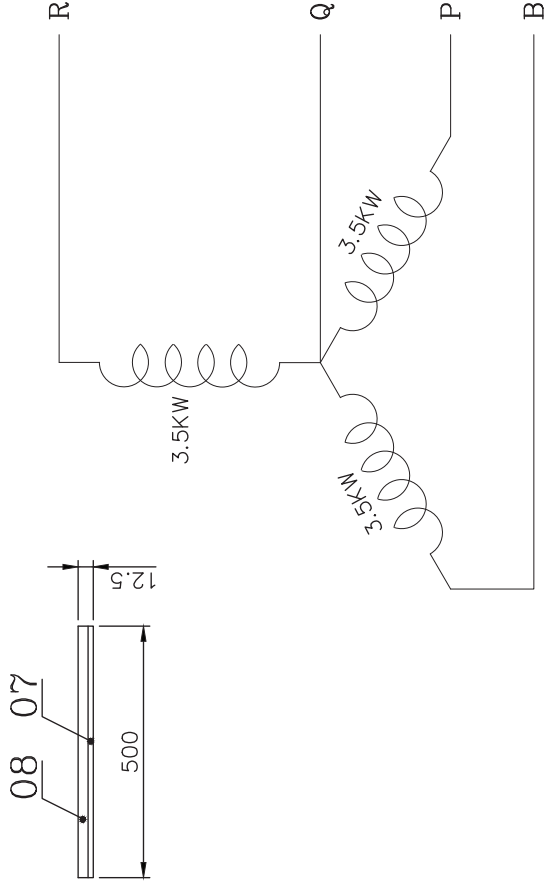
1	Sh.2tx1D655x0D916	SA 240 TYPE 304	ASME	5.15	06			
1	PIPE Ø51x7.1x25L	SA 240 TYPE 304	ASME	0.15	05			
1	Sh.2tx130x195	SA 240 TYPE 304	ASME	0.41	04			
1	Sh.2thx135x220	SA 240 TYPE 304	ASME	2.07	03			
1	Sh.2txø655	SA 240 TYPE 304	ASME	5.39	02			
1	Sh.2tx460x2065	SA 240 TYPE 304	ASME	15.24	01			
No. of Pieces			28.41	4M20C6029280	ITEM No.			
SCALE 1:10	REFERENCE:		ALTERATIONS:	DCN	REF	DATE	SIGN.	INDEX
	DRN. T. I. BALAKRISHNAN	T. P. Balakrishnan						
	CHD. R. RAMAMOORTHY							
	APPD. KRAMANAN							
	DATE 18.04.2012							
MACHINE: CANTEN EQUIPMENT			TYPE: CANTEN					
TITLE: INNER VESSEL (ELECTRIC RICE BOILER)			DRAWING No:		3M20C6014894			
			Sheet No:		No. of Sheets:			

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CONNECTING DETAIL

3 COILS ARE CONNECTED IN STAR EACH COIL = 3.5 KW PER HOUR
TOTAL CAPACITY OF THE PLATE = TOTAL 3x3.5 = 10.5 KW
EACH COIL RESISTANCE 17 Ω
ELEMENT WIRE SIZE 16 SWG

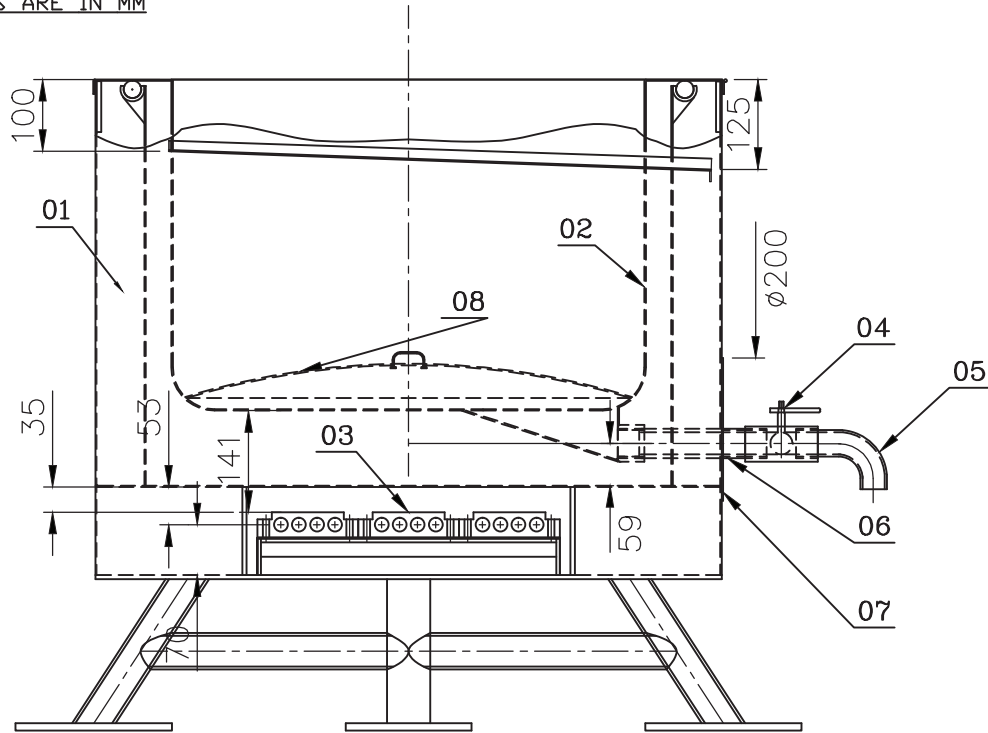


4	HEX.NUT M4	BPS: 41304	IS: 1363			11
4	SCREW M4x25L	BPS: 41201	IS: 1366			10
24	SPLIT PIN Ø4x60		IS: 549			09
01	10tX420x500L	CERAMIC BOARD	—	—		08
01	SH.2.5t.x420x500L	SA 240 TYPE 304	ASME	4.20		07
03	PL 5tX30x410L	SA 240 TYPE 304	ASME	1.48		06
02	PL 5tX50x410L	”	”	1.64		05
02	PL 5tX50x650L	”	”	2.60		04
03	HEATING ELEMENT COIL	Ni Cr.80/20	—	0.79	3E20C6013500	03
04	TWOTERMIAL CONNECTOR		—	0.36	4E20C6025344	02
12	HEATING ELEMENT SUPPORT	SILLUMINATE	IS: 2044	3.96	4E20C6025403	01
				15.03	4M20C6029280	03
No. of Pieces		DESCRIPTION	MATERIAL	STANDARD	NET.WT.IN KGS.	ITEM No.
		REFERENCE:		ALTERATIONS:	DON REF	INDEX
					DATE	SIGN.
		SCALE	DRN: T.T.BALAKRISHNAN	DATE		
			CHD: R.RAMAMOORTHY			
		1:5	APPD: K.RAMANAN			
		DATE	18.04.2012			
		MACHINE:	CANTEEN EQUIPMENT	TYPE:	CANTEEN	
		TITLE:	HEATING ELEMENT MOUNTING ARRANGEMENT (ELECTRIC RICE BOILER)	DRAWING No:	3M20C6014895	No. of Sheets:

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CAUTION:

ALL DIMENSIONS ARE IN MM



NOTE: -

1. MATERIAL SHOULD BE OF STAINLESS STEEL
2. SHOULD BE NON MAGNETIC
3. THE FOLLOWING TEXT "BHEL CANTEEN" TO BE ENGRAVED IN ALL VESSELS

1	FILTER	STAINLESS STEEL		5.28	4M20C6029285	08
1	Sh2txø200	,,		0.47		07
1	1 1/2" BSP-BARREL	,,				06
1	1 1/2" BSP-ELBOW	,,				05
1	1 1/2" BSP-BALL VALVE	,,				04
1	HEATING ELEMENT	,,		15.03	3M20C6014895	03
1	INNER VESSEL	,,		27.64	3M20C6014894	02
1	OUTER VESSEL FOR ELECTRIC RICE BOILER	,,		129.68	2M20C6005001	01



No. of Pieces	DESCRIPTION	MATERIAL	STANDARD	NET.WT.IN KGS.	DRAWING No.	ITEM No.
	REFERENCE:		ALTERATIONS:	DCN REF	DATE	SIGN.
SCALE	DRN. T.T.BALAKRISHNAN	T.T. Balakrishnan				
	CHD. R.RAMAMOORTHY					
1:10	APPD. K.RAMANAN					
	DATE 18.04.2012					



MACHINE: CANTEEN EQUIPMENT

TITLE: ELETRIC RICE BOILER ASSY

TYPE: CANTEEN

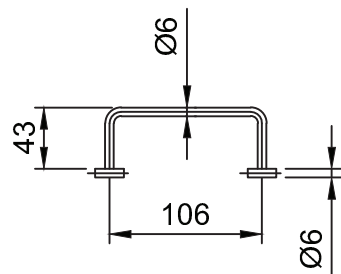
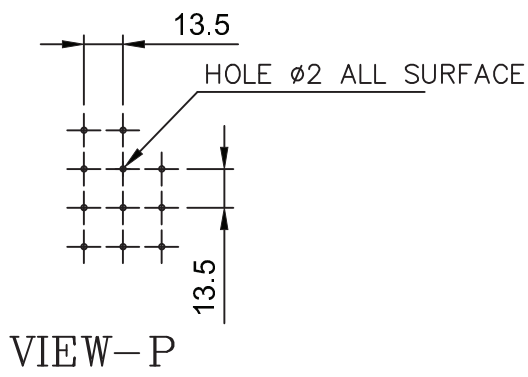
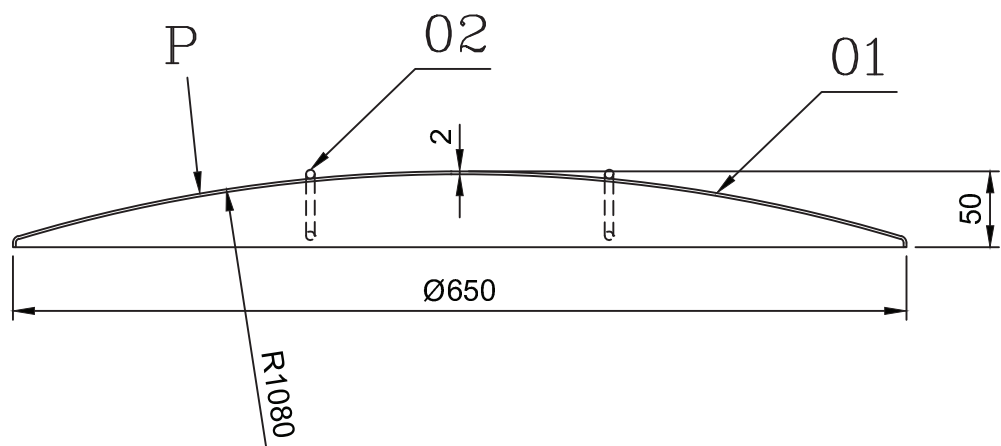
DRAWING No: 4M20C6029280

Sheet No: No. of Sheets:

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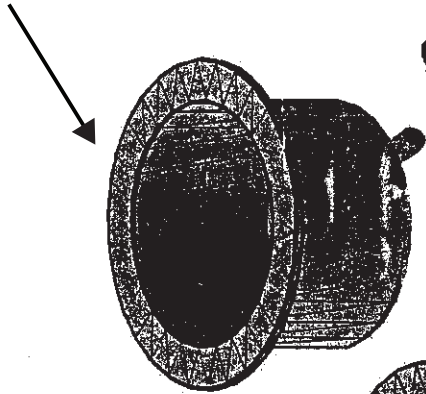


ITEM NO-02

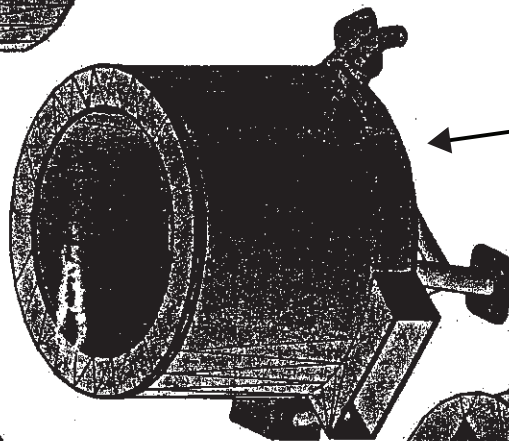
2	HANDLE	SA 240 TYPE 304	ASME	0.20		02
1	Sh2txØ650	SA 240 TYPE 304	ASME	5.21		01
				5.41	4M20C6029280	04
No. of Pieces	DESCRIPTION	MATERIAL	STANDARD	NET.WT.IN KGS.	DRAWING No.	ITEM No.
	REFERENCE:		ALTERATIONS:	DCN REF	DATE	SIGN.
SCALE	DRN.	T.T.BALAKRISHNAN	T.T. Balakrishnan			
	CHD.	R.RAMAMOORTHY				
1:5	APPD.	K.RAMANAN				
	DATE	18.04.2012				
	MACHINE:	CANTEEN EQUIPMENT	TYPE:	CANTEEN		
	TITLE:	FILTER (ELECTRIC RICE BOILER)	DRAWING No:			
			4M20C6029285			
			Sheet No:		No. of Sheets:	



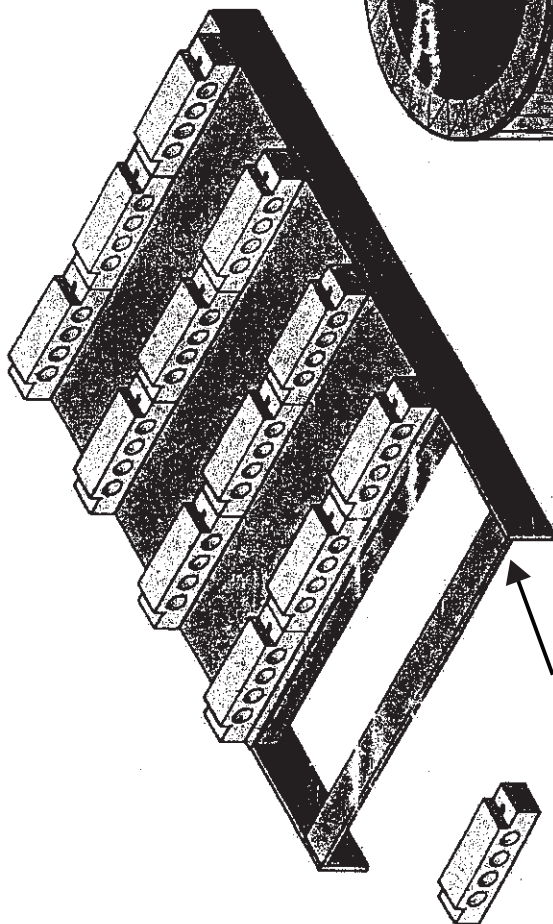
Inner Vessel



Drain pipe with
ball valve



Boiler with outer shell
and stand, Drain pipe



Heating element
Holder/tray

