

## Annexure

### Technical Specifications

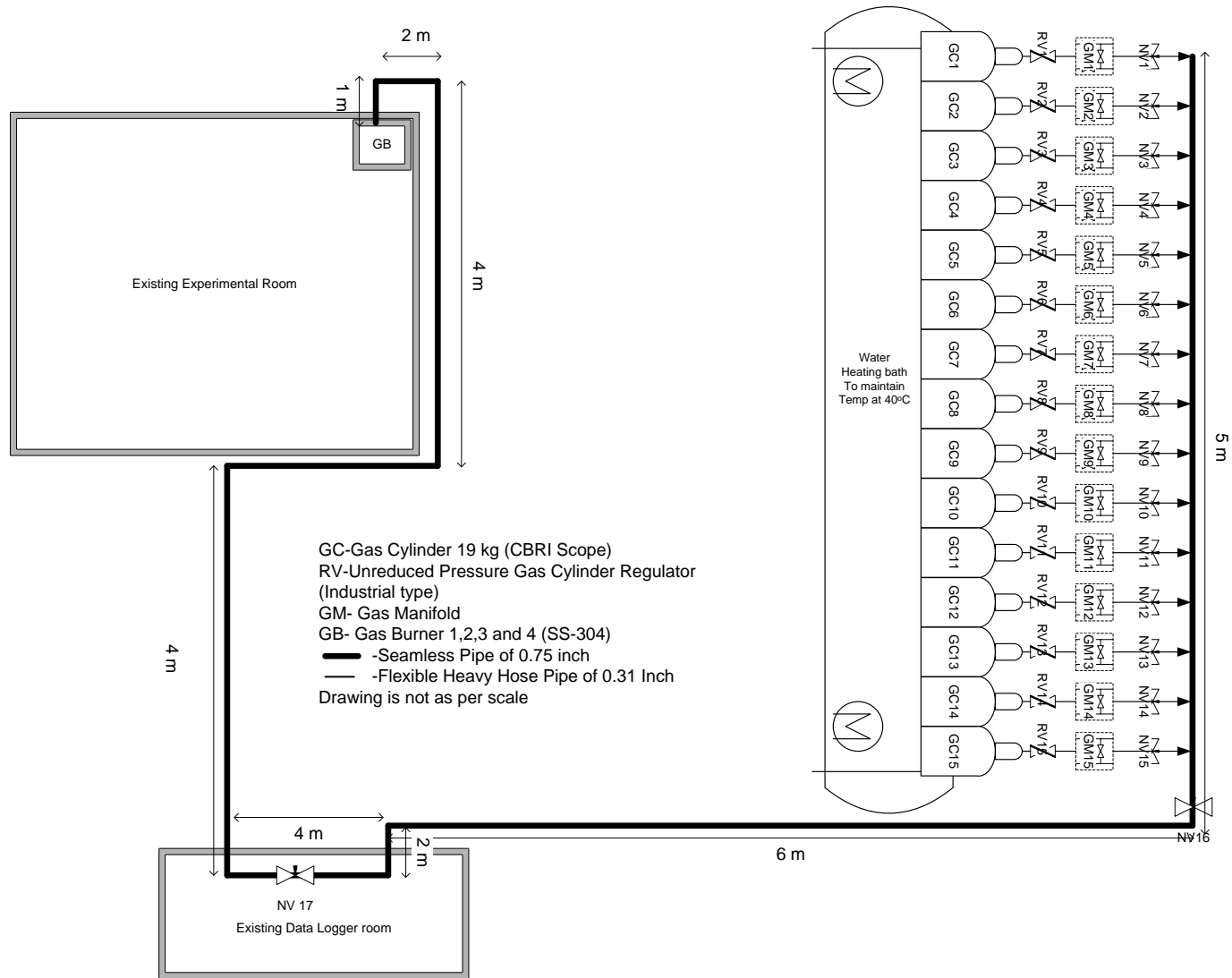
#### Gas burner ignition system

**Fabrication and Installation of Gas burner system comprising of Burner, pipes and fittings as per specifications given below and attached Drawing 1 and Drawing 2.**

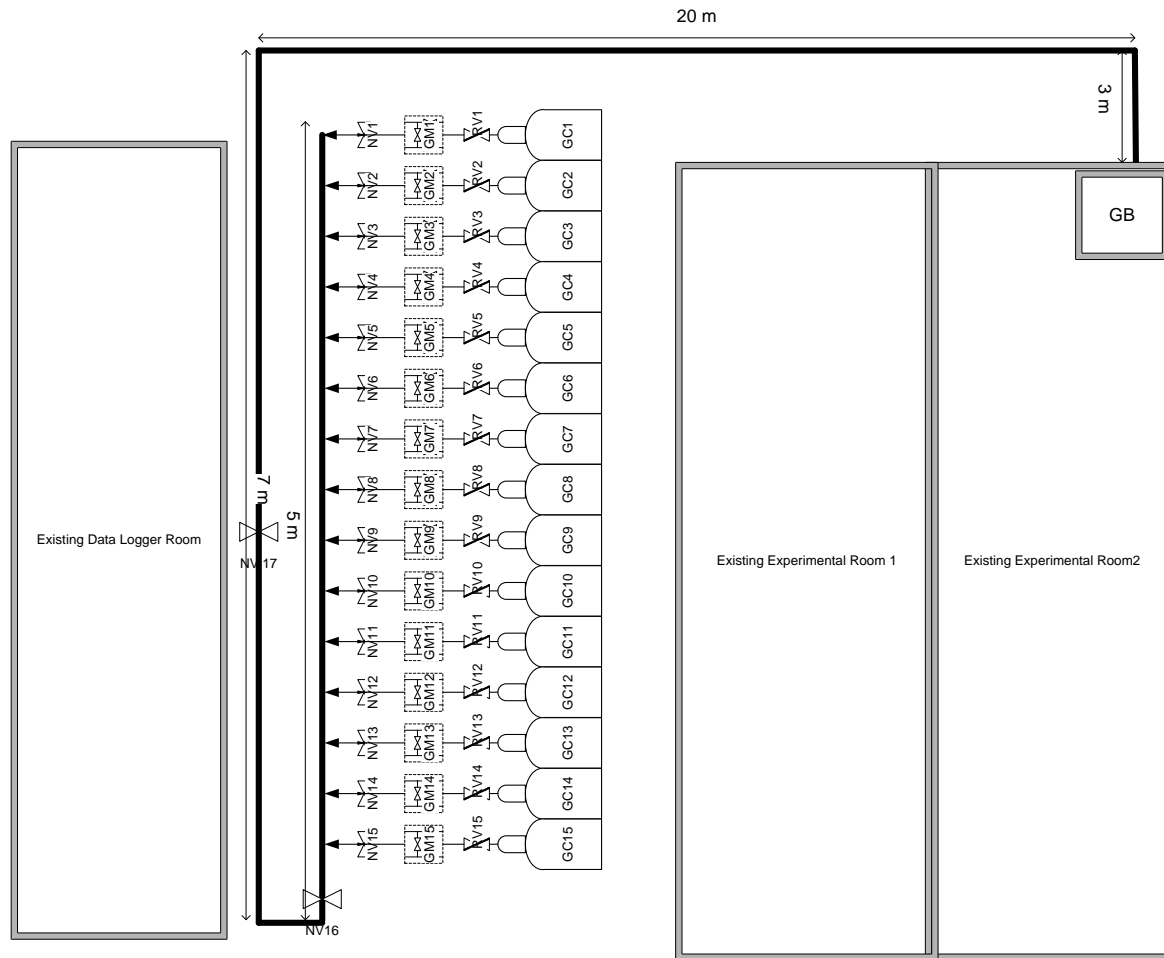
##### **Details of specifications**

	<b>Item</b>	<b>Type</b>	<b>Size</b>	<b>No</b>
1.	Gas Burner 1	SS 304	As per Drawing-3	01
2.	Gas Burner 2	SS 304	As per Drawing-4	01
3.	Gas Burner 3	SS 304	As per Drawing-5	01
4.	Gas Burner 4	SS 304	As per Drawing-6	01
5.	Industrial Gas Regulator Unreduced	Brass	15 PSI	30
6.	Gas Regulator Manifold	Brass	Inlet 15 PSI kg/cm <sup>2</sup> Outlet 1.05 kg/cm <sup>2</sup>	30
7.	Gas Regulating Needle Valve	SS 304	0.75" inch Dia	40
8.	Seamless Pipes (MS) (Length as per Drawing-1 and Drawing-2 ±20%)	Class C	0.75" inch Dia	120 m
9.	Minor fittings (Joining by threading and flanges only)	Seamless Class C	0.75" inch dia.	40 Elbows, 40 sockets, 5 Union, 40 Tees, 40 SS adapter, 10 Reducers, 80 Nozzles, etc...
10.	Gas Hose Pipe Heavy	Seamless flexible	8 mm, 15 psi pressure (max)	60 m.
11.	Water Heating Bath for Drawing 1	Jacket of composite aluminum and steel	5 m × 0.6 m × 1 m (H) With two heaters and auto cut off to maintain water Temperature at 40° C	01
12.	LPG Gas Detector	Alarm type	For warning of gas leakage	04.
13.	Pilot Flame	Integration of 2.5 Kg LPG cylinder with regulator attached to hose with 8 mm dia steel pipe with 2.5 m length		01
14.	LPG Gas Cylinders of 19 kg commercial cylinders are from CBRI scope.			
15.	The above specified items are to be integrated with complete installation and commissioning to be carried out at experimental sites as per Drawing 1 and Drawing 2.			
16.	Installation related work such as civil (lying of pipes underground by 1mtr), electrical, welding or any other works will be carried out by the bidder.			
17.	Operating manuals should be provided with complete functional demonstration of operation of the system.			
18.	Complete system warranty for two years.			

# Drawing 1

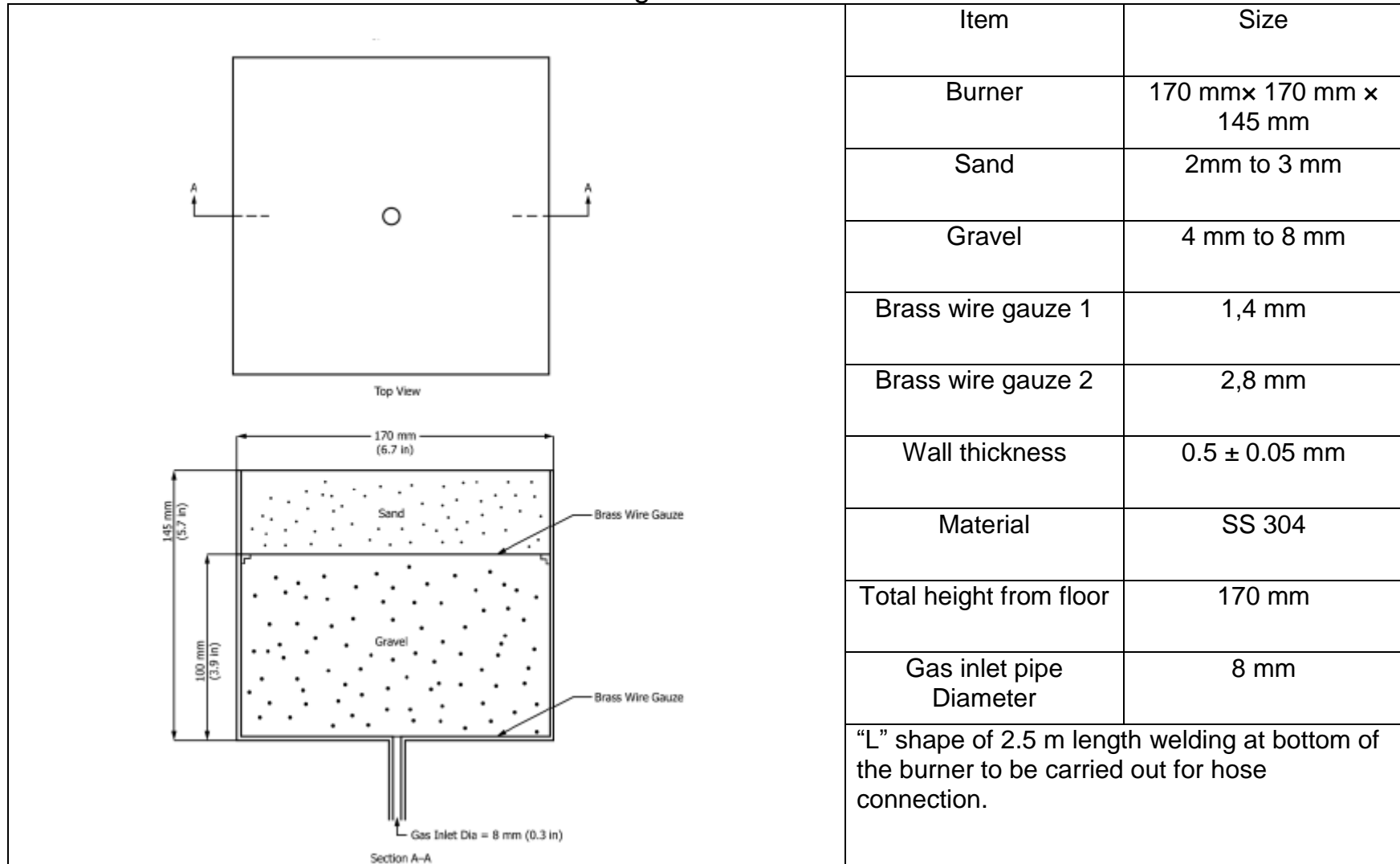


# Drawing 2

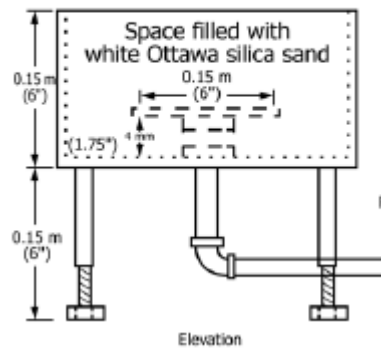
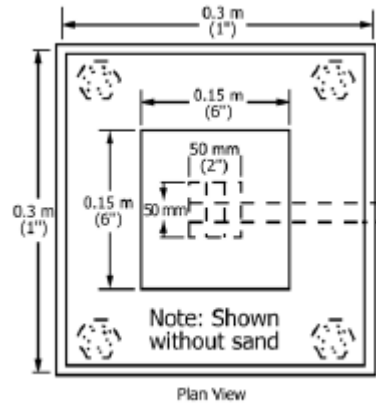


- GC-Gas Cylinder 19 kg (CBRI Scope)
  - RV-Unreduced Pressure Gas Cylinder Regulator (Industrial type)
  - GM- Gas Manifold
  - GB- Gas Burner 1,2,3 and 4 (SS-304)
  - -Seamless Pipe of 0.75 inch
  - -Flexible Heavy Hose Pipe of 0.31 Inch
- Drawing is not as per scale

Drawing 3: Gas Burner 1

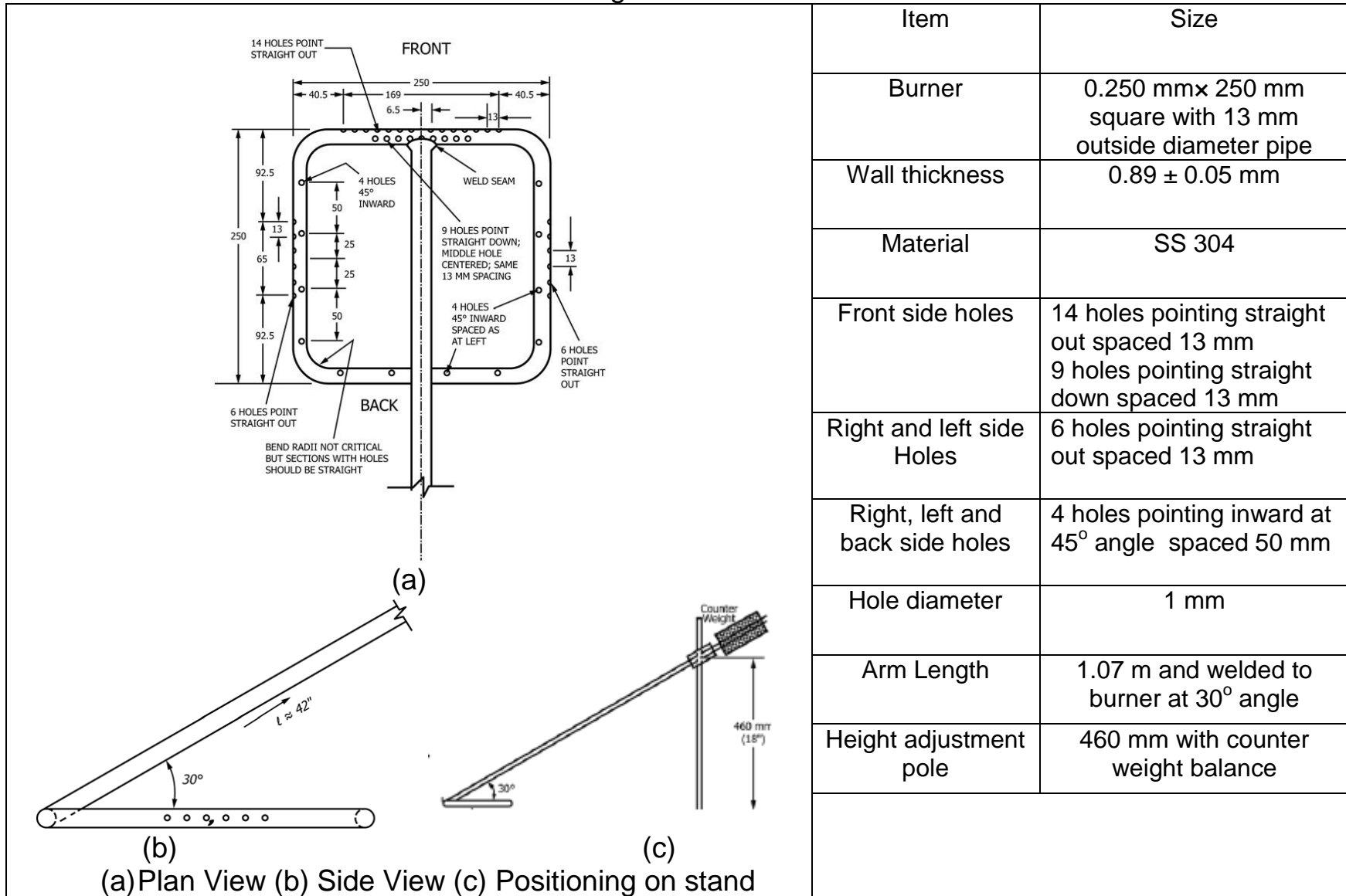


Drawing 4: Gas Burner 2

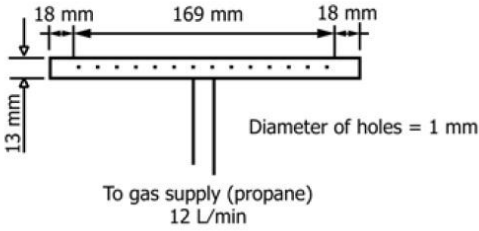
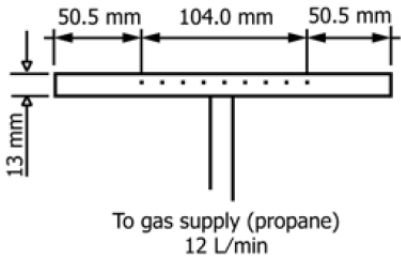
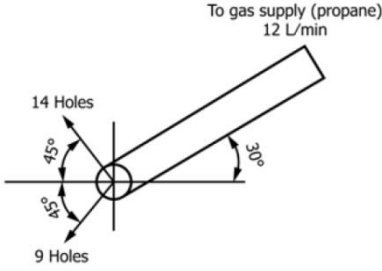


Item	Size
Burner	0.3 m x 0.3 m x 0.15 m
Wall thickness	0.5 ± 0.05 mm
Material	SS 304
Total height from floor	0.3
Gas inlet pipe Diameter	¾" Inch
Sand	2mm to 3 mm
Plenum	0.15 m x 0.15 m x 0.025 m
Total height from floor	0.3 m
Height Adjustment	SS thread based system
"L" shape of 2.5 m length welding at bottom of the burner to be carried out for hose connection.	

Drawing 5: Gas burner 3



Drawing 6: Gas burner 4

	Item	Size
 <p>(a)</p>	Burner	"T" Shaped 205 mm long with 13 mm outside diameter pipe
	Wall thickness	0.89 ± 0.05 mm
	Material	SS 304
 <p>(b)</p>	holes	Two set of holes equally spaced and centered along the head and oriented at 90° angle each other with 1 mm dia.
 <p>(c)</p>	Top side	14 holes out ward at 15° angle from top center line spaced at 13 mm
<p>(a)Top set of holes (b) Bottom set of holes (c) orientation of burner head with handle</p>	Bottom side	9 holes out ward at 75° angle from bottom center line spaced at 13 mm
	Arm Length	1.07 m and welded to burner at 30° angle
	Height adjustment pole	460 mm with counter weight balance