SIMOND STORE

We also deals in

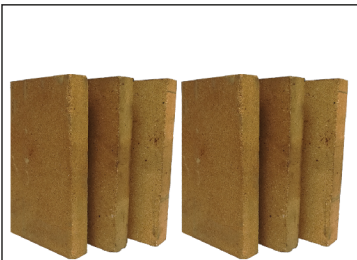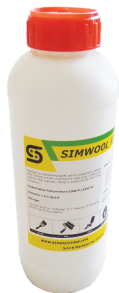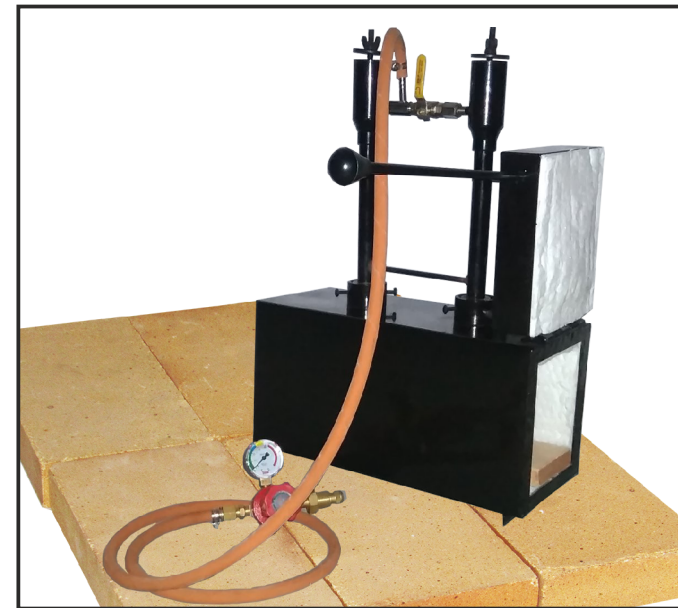|	
Regulator & Hose-Clamp	Propane Gas Burner
Blacksmith Tongs	Blacksmith Envil
Refractory Firebrick	Ceramic Fiber Rigidizer / Refractory Coating

Please Visit
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USER MANUAL
&
ASSEMBLY INSTRUCTIONS
FOR
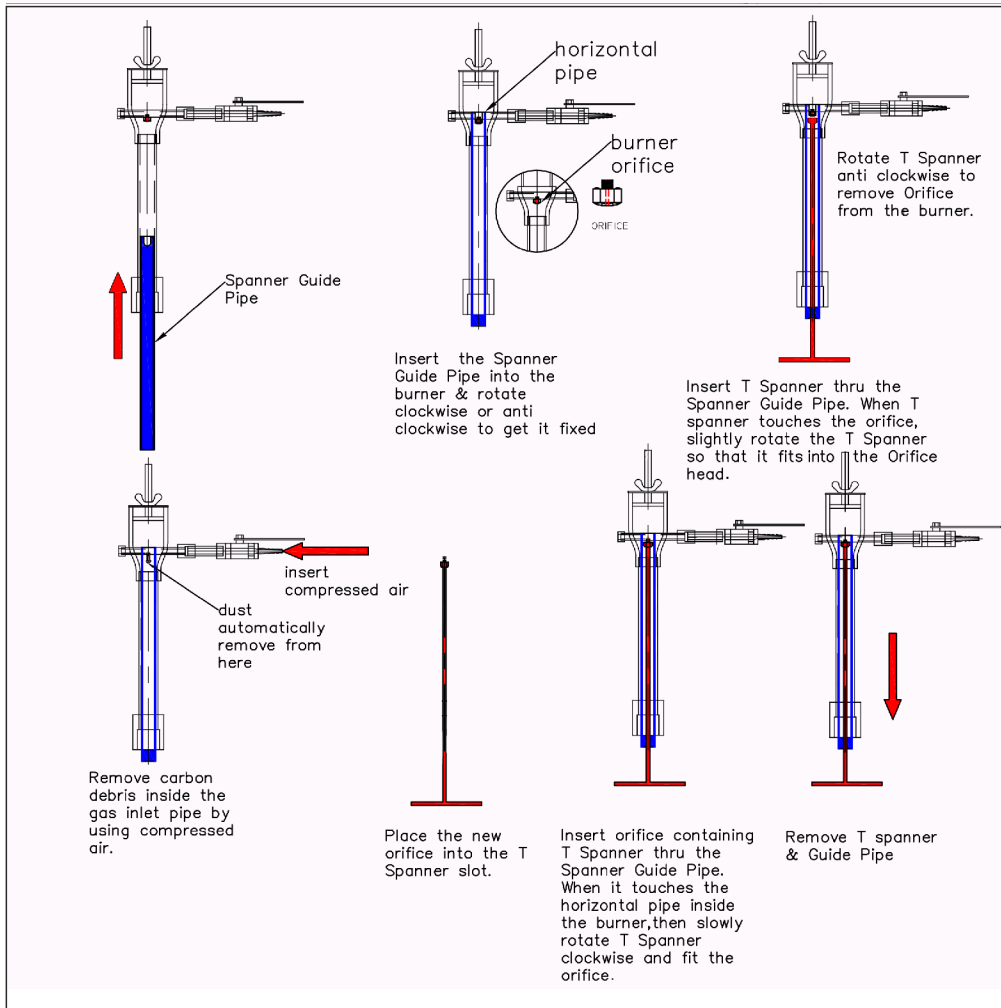# PROPANE FORGE

Important Notes

Keep this Instruction Manual with you at the time of Assembly and Operation.
This will guide you the right way.
For the Adult use only.
A Product by Simond Store

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Double Burner Btu Calculation

PSI	BTU/Hrs.	20 lbs capacity (Hrs)	30 lbs capacity (Hrs)	40 lbs capacity (Hrs)	50 lbs capacity (Hrs)	60 lbs capacity (Hrs)	100 lbs capacity (Hrs)
1	35,316	12.23	18.34	24.455	30.57	36.685	61.14
2	49,944	8.645	12.97	17.29	21.615	25.94	43.23
3	61,168	7.06	10.59	14.12	17.65	21.18	35.3
4	70,630	6.115	9.17	12.23	15.285	18.34	30.57
5	78,968	5.47	8.205	10.935	13.67	16.405	27.34
6	86,504	4.99	7.49	9.985	12.48	14.975	24.96
7	93,436	4.62	6.93	9.245	11.555	13.865	23.11
8	99,886	4.325	6.485	8.645	10.81	12.97	21.615
9	1,05,946	4.075	6.115	8.15	10.19	12.23	20.38
10	1,11,676	3.865	5.8	7.735	9.665	11.6	19.335
11	1,17,128	3.685	5.53	7.375	9.215	11.06	13.435
12	1,22,336	3.53	5.295	7.06	8.825	10.59	17.65
13	1,27,332	3.39	5.085	6.785	8.48	10.175	16.955
14	1,32,138	3.27	4.9	6.535	8.17	9.805	16.34
15	1,36,776	3.155	4.735	6.315	7.895	9.47	15.785
16	1,41,262	3.055	4.585	6.115	7.64	9.17	15.285
17	1,45,608	2.965	4.45	5.93	7.415	8.895	14.83
18	1,49,830	2.88	4.325	5.765	7.205	8.645	14.41
19	1,53,936	2.805	4.21	5.61	7.015	8.415	14.025
20	1,57,934	2.735	4.1	5.47	6.835	8.205	13.67
21	1,61,834	2.67	4	5.335	6.67	8.005	13.34

Double Burner BTU Chart
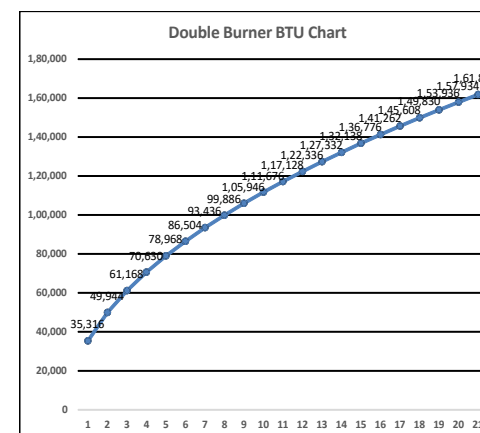
Propane Pressure (PSI):
This data are collected based on theoretical calculation it may be vary by product design but specification & application remain same.

INDEX

horizontal pipe

burner orifice

ORIFICE

Rotate T Spanner anti clockwise to remove Orifice from the burner.

Spanner Guide Pipe

Insert the Spanner Guide Pipe into the burner & rotate clockwise or anti clockwise to get it fixed

Insert T Spanner thru the Spanner Guide Pipe. When T spanner touches the orifice, slightly rotate the T Spanner so that it fits into the Orifice head.

insert compressed air

dust automatically remove from here

Remove carbon debris inside the gas inlet pipe by using compressed air.

Place the new orifice into the T Spanner slot.

Insert orifice containing T Spanner thru the Spanner Guide Pipe. When it touches the horizontal pipe inside the burner, then slowly rotate T Spanner clockwise and fit the orifice.

Remove T spanner & Guide Pipe

- Keep & Store this user manual for future reference.

Introduction to Simond Store

Our Store is known for its best quality products and customer service. Customer Service has always been our top priority. Simond Store deals in variety of products such like, various types of Propane gas Forge, Propane gas Furnace, Jewellery Making Tools, Blacksmith & Goldsmith products, Refractory Products and many more. We have earned customer satisfaction by providing quality product in timely manner.

Description

Propane Forge is inevitable product for a Blacksmith, Hobbyist, Jeweler & Knife makers. It is ideal for heating and bending of metals, tempering and heat treatment of small knives & agriculture use small tools.

This Propane forge is made from Steel material and its heating zone is fully insulated with Refractory Ceramic Fiber, which can resist temperature up to 2600°F (1425°C). A rigid block of refractory fire brick placed at the bottom of the forge to resist high velocity firing.

Where to Use

- For Outside Use Only.
  (Any outside safe area of operations)

Warning

- Improper Installation, adjustment, alteration, service, maintenance or any mistake may result in serious accident, damages or personal injury.

- Read how to Install, Assemble & operate before installing and operating.

- Ignorance to safety instructions may cause fire or explosion that creates many kind of risks.

Burner	Orifice Front Side	Orifice Back Side

T Spanner	Spanner Guide Pipe
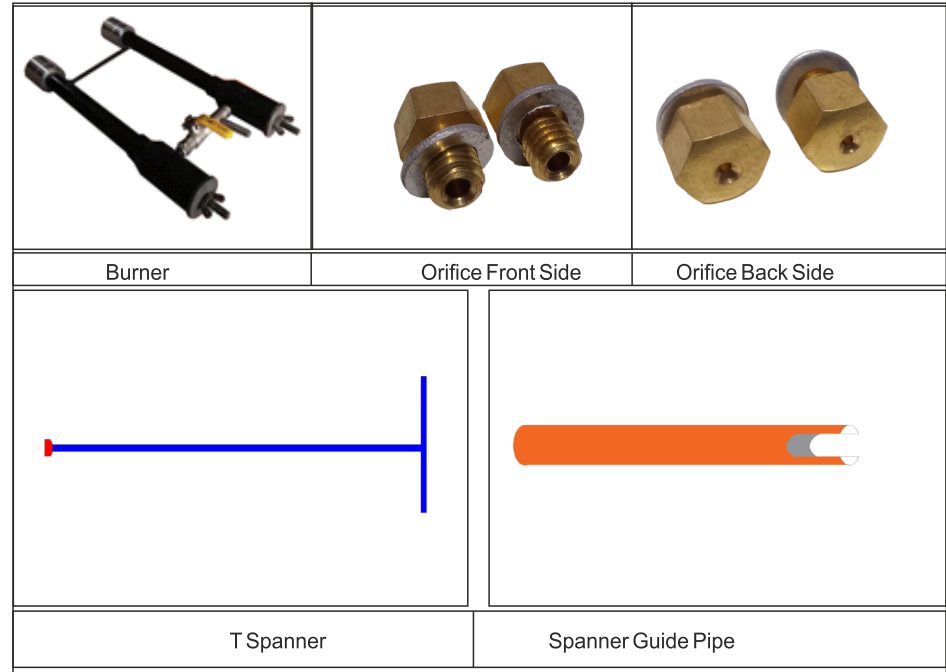
Troubleshooting: (Diagram on Next Page)

Step-1: Insert Spanner Guide Pipe into the burner & rotate clockwise or anti-clockwise to get it fixed as shown in below diagram.

Step-2: Insert T Spanner thru the Spanner Guide Pipe. When T spanner touches the orifice, slightly rotate the T Spanner so that it fits into the Orifice head.

Step 3: Rotate T Spanner anti-clockwise to remove Orifice from the burner.

Step 4: Remove carbon debris inside the gas inlet pipe by using compressed air.

Step 5: Check orifice hole, if chocked try to clean it by compressed air or replace it by new orifice.

Step 6: Installing new orifice into the burner
   a) Follow Step 1 as above instruction.
   b) Place the new orifice into the T Spanner slot.
   c) Insert orifice containing T Spanner thru the Spanner Guide Pipe. When it touches the horizontal pipe inside the burner, then slowly rotate T Spanner clockwise and fit the orifice.
   d) Now burner is ready for firing.

Operating Instructions

1. Open the wing nut slightly at the top of Burner.
2. Open the outlet valve of propane gas cylinder. So gas will be flow though Regulator.
3. Regulator has monometer which shows gas pressure.
4. Rotate knob of gas Regulator clockwise direction to open the gas flow. Set gas pressure as per desired flame.
5. For Double Burner: One burner is directly connected & another burner has a gas inlet valve. Kindly close this gas inlet valve. After ignition of first burner then open the gas inlet valve for firing of second burner (If required).
6. Light up the Forge by using Lighter at the opening of the burner inside the Forge body.
7. Now adjust the gas flow using inlet valve and air flow using the wing nut to get the complete combustion of gas and desired flame intensity.
8. Place the iron work-piece to be forged, inside the forge and under the flame using tong.
9. Remove work-piece once it is red hot and ready for shaping with the help of tong.
10. Close the gas outlet valve of the propane cylinder and wait until fire in the forge stops.
11. Remove the propane cylinder connections to the forge and place it away from forge.
12. Allow Forge to cool down to normal temperature before transferring it to other place (if required).

Burner Troubleshooting Solution

We found that many time issues occur because of burner chocking and improper flame output. These kind of issues arise due to clogging of burner orifice. We have worked on these issues and resolved it by improving design of burner. So you can clean orifice or you can replace it by new one. So you don't need to worry when you buy Forge from Simond Store.

What problems you may face in "PROPANE GAS BURNER?"
- No Flame or Low Flame
- Low temperature

Our Burner includes following kit:
1. Burner set
2. Orifice : One attached with each individual burners& two extra Orifice with the burner set.
3. T Spanner : It is a tool for fitment of orifice.
4. Spanner Guide Pipe : It is an orifice mounting guide pipe thru which the T Spanner can reach to the exact position to replace orifice very easily.
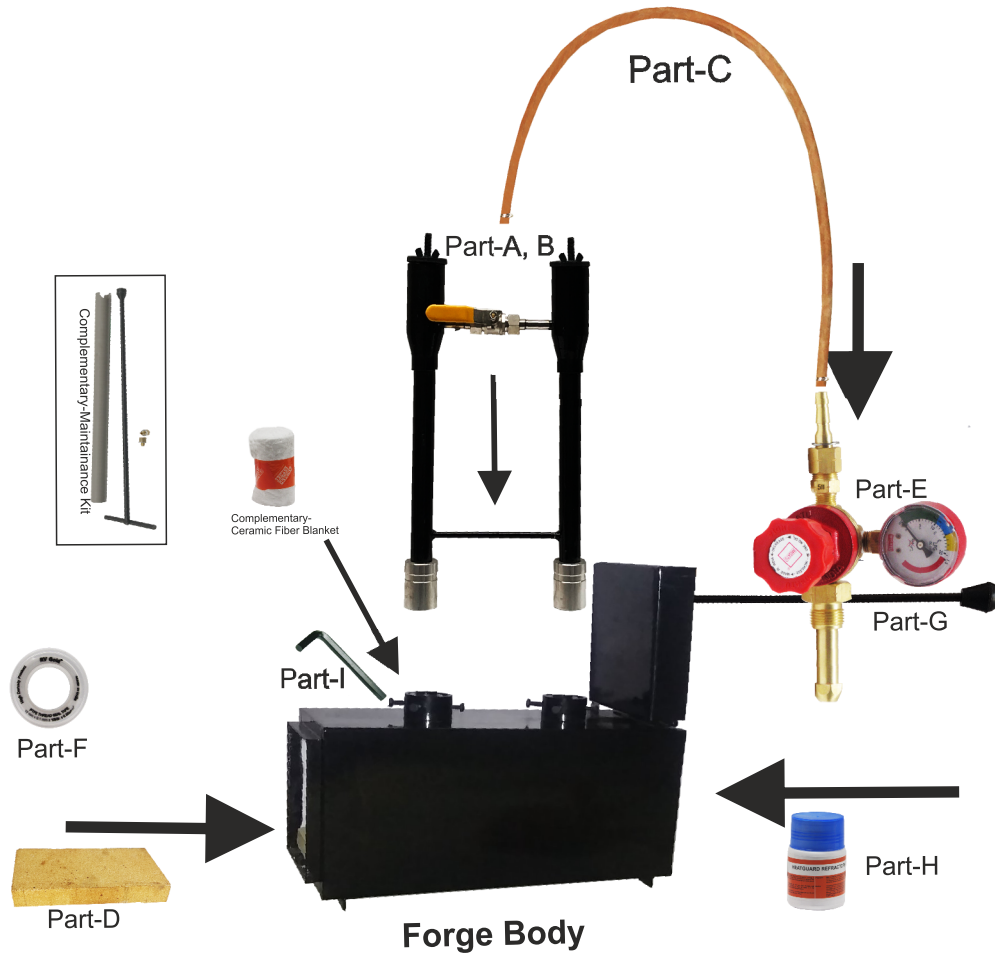
Safety Instructions

- Safety should be always in the first priority.

- Use this Propane Forge after reading these entire instructions for the proper and safe operation.

- Always use this Propane Forge on a hard non-combustible base This Propane Forge is for outdoor use only. Do not use it where any kind of damage can happen. Keep fire extinguisher nearby.

- This Propane Forge is for adult use only.

- Use fire retardant gloves & blacksmith tong for the operation with the work-piece.
-
- Never leave a hot forge unattended, even if the fuel is shut off and be cautious of high temperature of the forge parts immediately after forging session.

- Inspect your propane cylinder (especially the valve), your regulator (especially the connector to the cylinder and its O-ring) and your burner (especially the hose). In case if there is any signs of problems do not install or operate.

- Install the regulator by hand, without tools, until the nut (left-hand thread) is fully seated. Immediately tighten the nut with a wrench. Do not over tighten the nut, as this will only ruin the connectors.

- Always shut down the forge by turning off the fuel at the cylinder, then backing off the regulator knob (as a safety precaution.)

- Once, Forging Session is finished, Remove the Regulator from the cylinder & take the cylinder in outside area.

- Allow the forge to cool for at least half an hour before you leave the area. This is to prevent accidental fires from going undetected.

- Use gas lighter to ignite the Forge. (It is advisable to use the lighter which is more than 18 inch long.)

- **Simond Store will not be responsible for any damage or injury caused by improper use of Gas Forges.**

Forge Body & Accessories with its Identification

Complementary-Maintainance Kit

Complementary-Ceramic Fiber Blanket

Part-C

Part-A, B

Part-E

Part-G

Part-I

Part-F

Part-H

Part-D

Forge Body

Heat Guard Application Instruction

Heat Guard Refractory Coating:

Heat guard Refractory Coating is water based refractory coatings. This coating is used for coating of ceramic fibre lining to protect them against heat, flue gases and fumes. It prevents heat loss. It reflects radiant heat to the hot zone from the insulation surface that reduces the energy needed to achieve the target temperature thus it saves fuel. Hence it considerably prolongs the life of refractory.

Temperature Grade: 3270°F (1800°C)

Mixing:
Mix Dry Heat Guard Powder with 22 to 30% of clean tap water by mass for brushing applications.

Application:
Apply 1.5mm to 2 mm thick Heat Guard coating over refractory lining with the help of Brush.

Precaution:
After coating the area with Heat Guard coating, the first firing should be carried out slowly to avoid development of any surface cracks or other defects due to the moisture content in the coating material.

Curing:
The applied Heat Guard coating should be air dried for minimum 24 hours and then slowly raise the temperature up to 1112°F by increasing temperature 68 to 77°F / hr. and then reach to operating temperature at around 122°F / hour. For large coating thickness adequate air dying is required to avoid cracks the Heat Guard coating.

Double Burner Propane Gas Forge System

Specifications

Forge Type	:	Double Burner Forge With One Side Door
Shape	:	Rectangular
Burner	:	Double Burner
Inside Floor	:	1" Thick Refractory Fire Brick – 2 bricks
Forge Body Construction	:	16 Gauge (1.5mm) Thick Structural Square Steel Tube
Forge Internal Dimensions	:	5.8" (H) x 5.8" (W) x 18" (L)
Operating Temperature	:	2600°F (1425°C)
Inside Insulation Material	:	1" Thick Refractory Ceramic Fiber, 2600°F, 10 Pcf
Burner Nozzle Material	:	SS-304
Rigidizer	:	It is pre-rigidize

Part List

| Part	Description	Picture	Qty.
Forge	Forge Body		1
Part- A,B	Double Burner Set		1
Part - C	6.5 feet Gas Hose with Clamps		1
Part - D	1.25" Thick Refractory Fire Brick		2
Part - E	Gas Pressure Regulator with Manometer		1
Part - F	Teflon Tape		1
Part - G	Door Handle		1
Part - H	Heat Guard Refractory Coating		1
Part - I	Allen Key		1
Complementary Part	Ceramic Fiber for gap filling		1
Complementary Part	Orifice & Maintenance Kit for Burner Trouble Shooting		1

Unboxing

- Unwrap all the mentioned parts as per above list.

Assembly Instructions

- Surface Preparation by placing Refractory Fire Brick, Castable or Concrete.
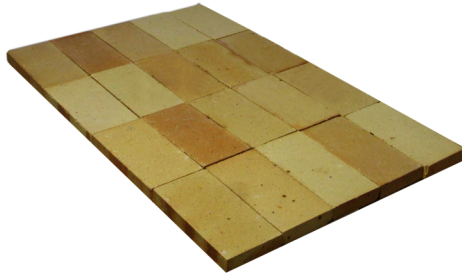

- Place Forge over the plain surface. You may prepare it by placing refractory bricks or by using castable cement which can withstand high temperatures.
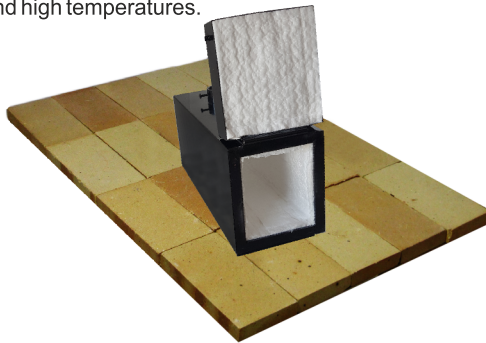
- Connect the Pre-Assembled Burner Part A & Part B with Part C (Which is Hose). Connect one end of hose with the Burner inlet pipe and other end with the Part E (Gas Pressure Regulator).Use clamps for proper tightening of hose at both ends.

- At the top of Burner, you can see wing nut (Part B) with washer which can be rotate clockwise and anti-clockwise direction to regulate the air flow pressure while firing.

- Connect the above system of Part A & B at the top of the Forge with the help of the coupling and adjustable screws. Please make sure that burner's nozzle at end do not cross over inside insulation of forge.

- Place Part D (Bricks) at the bottom of the Forge and over the ceramic fiber lining.

- Place PART-D (2 Brick) at the one door Clamp.
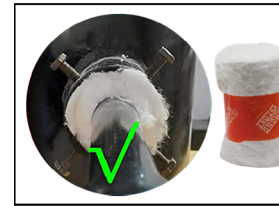
Why this gap filling is necessary?

- To Prevent the heat loss
- Heat Loss damage this area of furnace
- Damage the Furnace

- Connect Gas regulator with the propane Cylinder. Don't forget that pressure regulator has left thread. Check that there is no loose fitting of parts which may lead to gas leakage.

- Place PART-G at front of Forge to hold the forging metal.

- Light up the forge by using lighter at the opening of the burner inside the forge body.

- Now Forge is ready for the firing.