FLAMEBUILT

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CUSTOM BBQ BURNERS

BURNERS BUILT AROUND YOUR BBQ

Tube, cast and infrared burner architectures - custom-developed and manufactured in our owned factory.









OWNED FACTORY · PROJECT-DEFINED

Application / Reference / Interface / Fuel

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FOUR BBQ BURNER FAMILIES. ONE CUSTOM WORKFLOW.

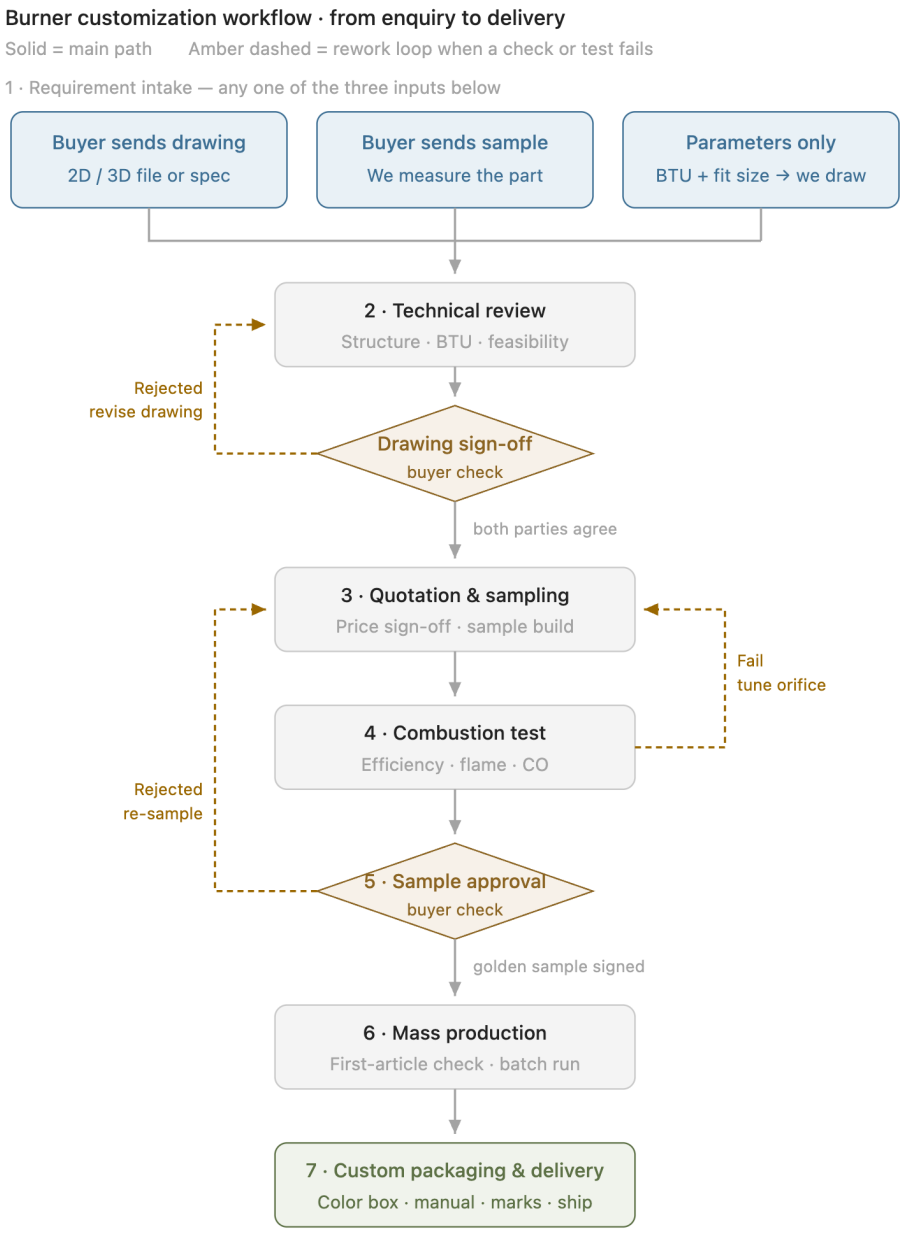
Choose a burner family, then move from enquiry and review through sampling, testing and production.

01
Stainless Tube Burners

02
Cast & High-Load Burners

03
Infrared Ceramic Burners

04
Portable Burner Systems



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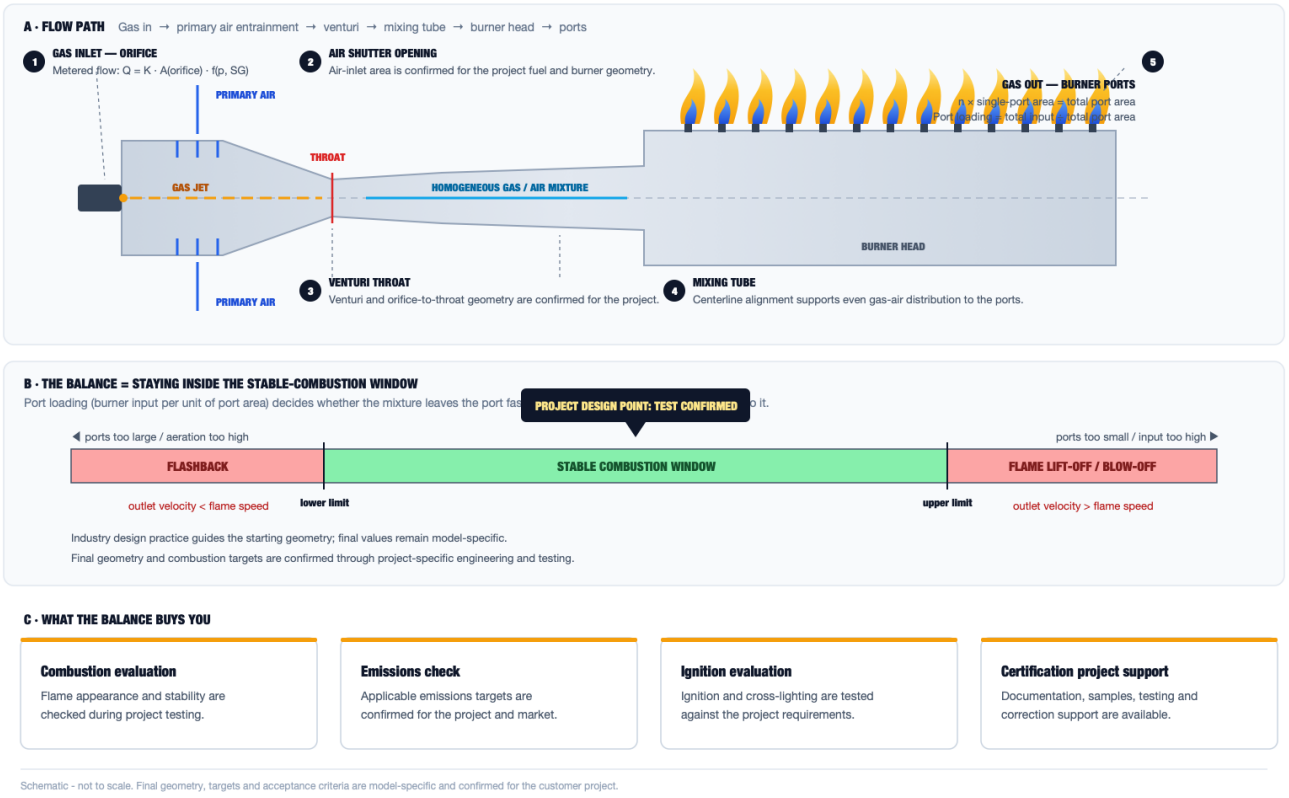
FROM GEOMETRY TO STABLE COMBUSTION

BALANCING GAS, AIR AND BURNER PORTS.

Burner engineering does not optimize one hole in isolation. The orifice, primary air, venturi, mixing tube and burner ports are reviewed as one combustion path.

GAS-IN / GAS-OUT BALANCE — Burner Head Engineering Principle

Orifice metering, primary aeration and total port area are reviewed together against the stable-combustion window.



C · WHAT THE BALANCE BUYS YOU

Combustion evaluation
Flame appearance and stability are checked during project testing.

Emissions check
Applicable emissions targets are confirmed for the project and market.

Ignition evaluation
Ignition and cross-lighting are tested against the project requirements.

Certification project support
Documentation, samples, testing and correction support are available.

Schematic - not to scale. Final geometry, targets and acceptance criteria are model-specific and confirmed for the customer project.

WHAT THIS MEANS FOR OEM DEVELOPMENT

01
Project-specific geometry

02
Stable-window design check

03
Testing and correction support

Final geometry, targets and acceptance criteria remain project-specific.

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ENGINEERED AROUND THE APPLIANCE

CUSTOMIZATION STARTS WITH THE APPLIANCE.

We do not force a standard size range. Burner geometry is defined together with the chamber, valve, inlet, mounting points and target fuel system.

BUYER INPUT	ENGINEERING DECISIONS	PROJECT OUTPUT
01 Application reference	Architecture	Project-defined burner
02 Chamber and mounting	Material grade	Sample confirmation
03 Fuel and inlet / outlet system	Ports and inlet / outlet	Production route
04 Quantity and milestones	Manufacturing and test	Packed delivery

CONFIGURABLE PROJECT VARIABLES

DIMENSIONS

Defined during project engineering review

MATERIAL

201 / 304 / 409 stainless steel options

SHAPE

Straight, formed, cast, ring or radiant

CONSTRUCTION

Tube, casting, housing and ceramic assembly

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01

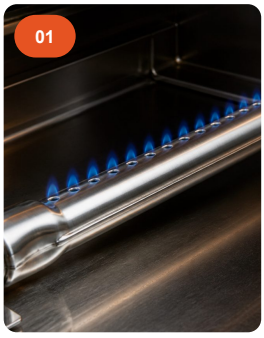
Stainless Steel Tube Burners

A flexible starting point for BBQ layouts built around straight, U-shaped or looped gas paths.

COMPARE STARTING POINTS

STAINLESS TUBE BURNER ARCHITECTURES

Compare straight, U-shaped and P-shaped starting points on one page; final geometry follows the BBQ design.



Custom Straight Stainless Steel Grill Burner Tube

TYPICAL START

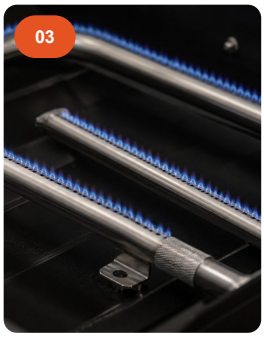
A practical starting point for multi-burner BBQ layouts and straightforward mounting geometry.



Custom U-Shaped Stainless Steel Tube Burner

TYPICAL START

Use the U profile as a starting point when the burner path needs to follow a broader perimeter.

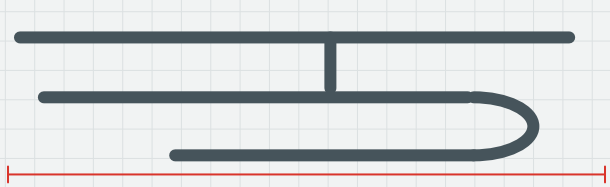


Custom P-Shaped Stainless Steel Burner Tube Set

TYPICAL START

Use this architecture when the customer's BBQ calls for a shaped loop plus a separate center tube.

OWN FACTORY CUSTOM BURNER SHAPE, SIZE, MATERIAL & STRUCTURE



TUBE BURNER DESIGN — NON-DIMENSIONAL CONCEPT

SHARE YOUR REQUIREMENTS. START YOUR CUSTOM BURNER PROJECT.

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WHY THIS BURNER FAMILY STANDS OUT

These images show the advantages of our stainless steel tube burners: material selection, airflow control, in-house combustion testing and certification-project support.



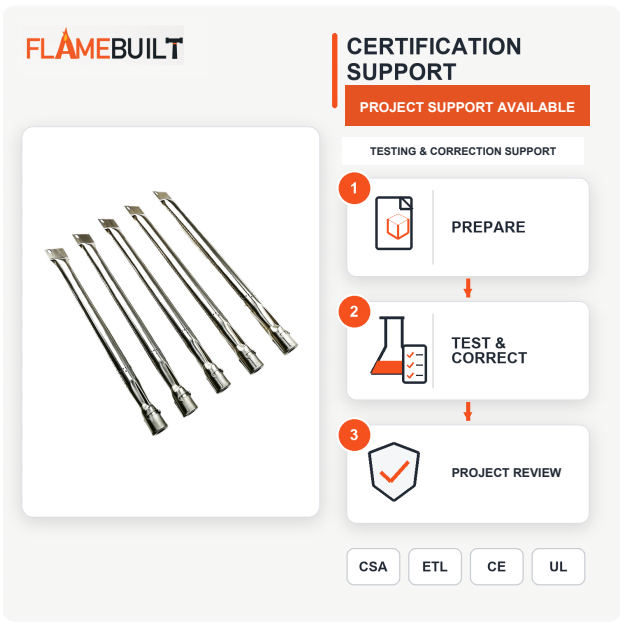
01 **Airflow control and insect barrier**



02 **Material-led durability**



03 **Combustion test on our line**



04 **Certification project support**

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02

Cast Grill & Power Burners

Cast architectures for bar, rectangular, H-shaped and concentric layouts developed around the BBQ design.

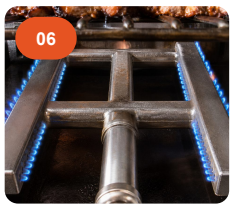
COMPARE STARTING POINTS

CAST BURNER ARCHITECTURE SELECTION

Four cast architectures are consolidated for faster OEM comparison by appliance envelope and heat-zone layout.



Custom Cast Rectangular Grill Burner



Custom H-Shaped Gas Burner



Custom Cast Bar-Style Grill Burner



Custom Cast Double-Ring Power Burner

OWN FACTORY CUSTOM BURNER SHAPE, SIZE, MATERIAL & STRUCTURE



CAST BURNER DESIGN

NON-DIMENSIONAL CONCEPT

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WHY THIS BURNER FAMILY STANDS OUT

These images show the advantages of our cast stainless steel burner: robust cast construction, port design, inlet protection and application-oriented structural details.

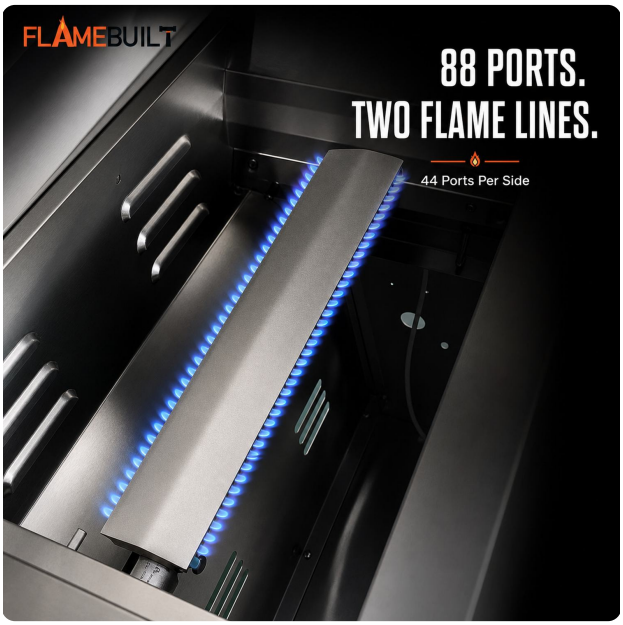


01 **Cast 304 stainless body**

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WHY THIS BURNER FAMILY STANDS OUT

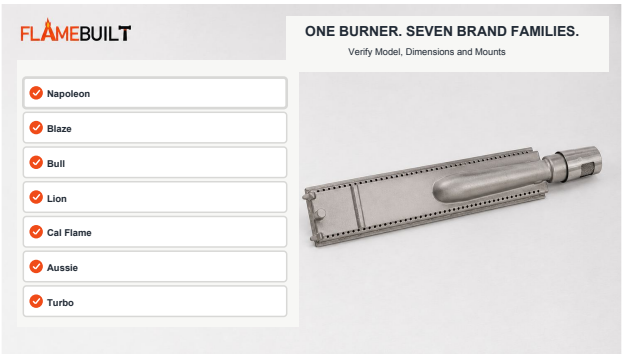
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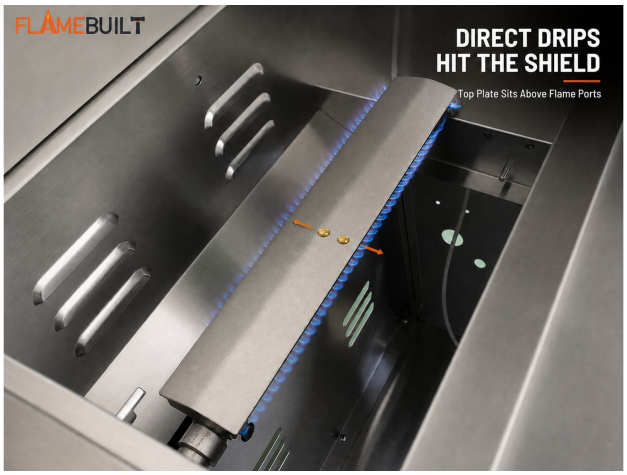
02 **Two-row port layout**



03 **Adjustable inlet protection**



04 **Reference fit experience**



05 **Integrated grease-shield detail**

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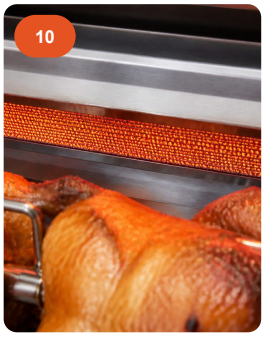
03 Infrared Ceramic Burners

Radiant BBQ burners for sear zones, rear rotisserie positions and larger cooking-system installations.

COMPARE STARTING POINTS

INFRARED CERAMIC BURNER ARCHITECTURES

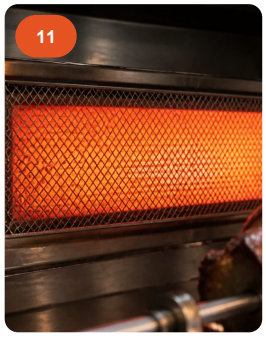
Compare rotisserie back-burner, heavy-duty and sear-burner starting points by installation position and radiant-face requirement.



Compact Infrared Rotisserie Back Burner

TYPICAL START

Use this format when the appliance needs a compact radiant source behind the rotisserie position.



Heavy-Duty Infrared Ceramic Burner

TYPICAL START

Use this architecture when the project requires a larger ceramic face and more substantial mounting frame.



Custom Infrared Ceramic Sear Burner

TYPICAL START

Use this burner when the BBQ architecture includes a defined radiant searing position.

OWN FACTORY CUSTOM BURNER SHAPE, SIZE, MATERIAL & STRUCTURE



INFRARED BURNER DESIGN — NON-DIMENSIONAL CONCEPT

SHARE YOUR REQUIREMENTS. START YOUR CUSTOM BURNER PROJECT.

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WHY THIS BURNER FAMILY STANDS OUT

This image highlights a project-specific infrared burner advantage: a one-piece drawn housing paired with sealing fiber to help reduce unintended gas-air escape paths.



01 **One-piece drawn housing and sealing-fiber structure**

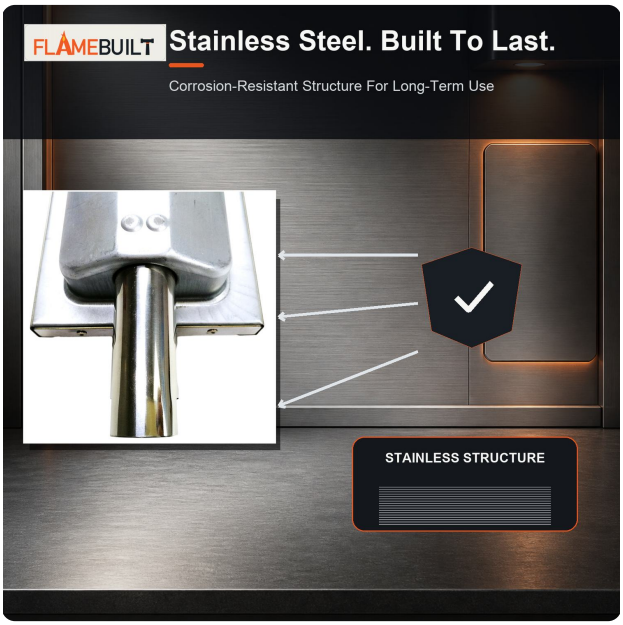
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WHY THIS BURNER FAMILY STANDS OUT

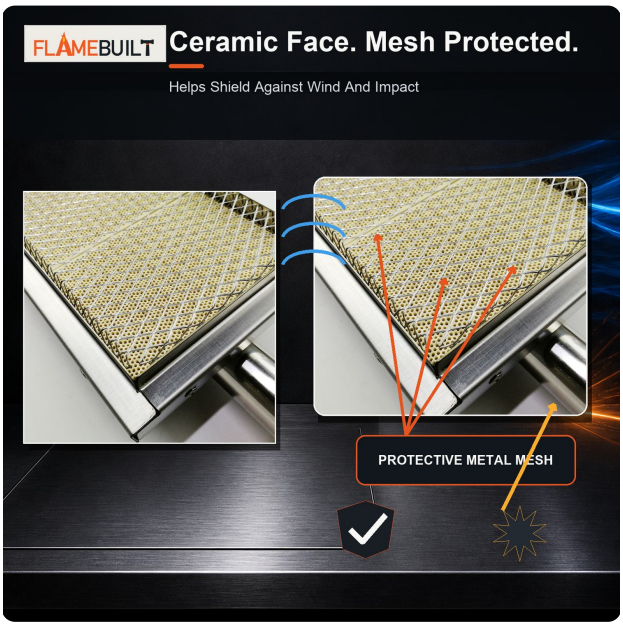
These images show the advantages of our infrared ceramic burners: radiant heat, stainless housing, ceramic-face protection and controlled heat distribution.



02 **Infrared radiant heat architecture**



03 **Stainless housing construction**



04 **Ceramic-face mesh protection**



05 **Ceramic radiant-face heat distribution**

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PROJECT ARCHITECTURE

12

Portable Gas Burner Tube Kit

A burner-tube and mounting-kit solution for portable BBQ systems and project-specific assemblies.







IN-HOUSE TRACK: Tube cutting · Punching · Welding · Assembly · Testing

BEST STARTING POINT

Use this route when the burner needs to integrate with a compact frame, hose connection and removable cooking setup.

TYPICAL APPLICATION

Portable cooking systems / custom outdoor equipment

ARCHITECTURE

Tube burner / support brackets / project connection set

PROJECT CUSTOMIZATION

Dimensions / material / shape / construction

PROJECT CONFIRMATION

Final dimensions, material grade, inlet, mounting details and combustion parameters are confirmed against the customer project.

ARCHITECTURE FIRST

TWELVE BURNER ARCHITECTURES. ONE SHORTLIST.

Shortlist by BBQ design and combustion format; confirm dimensions, material, mounting and inlet / outlet during engineering review.

01 TUBE & CAST BURNERS

#	ARCHITECTURE	FORM	TYPICAL BBQ USE
01	**Straight Burner Tube**	Formed tube / punched port pattern / welded details	Gas grills / custom cooking equipment
02	**U-Shaped Tube Burner**	Bent tube / configurable ports / project mounting tabs	Gas grills / custom heating chambers
03	**P-Shaped Burner Tube Set**	Shaped loop / center tube / interface-specific set	Multi-zone gas BBQs
04	**Cast Grill Burner**	Cast body / side port rows / inlet-end assembly	Gas grills / replacement-development projects
05	**Cast Rectangular Burner**	Cast rectangular loop / central bridge / side inlet	Griddles / BBQs / custom heating applications
06	**H-Shaped Gas Burner**	Parallel branches / center bridge / project inlet	BBQs / griddles / fire-feature applications
07	**Cast Bar-Style Burner**	Cast bar body / side ports / inlet-end mount	Gas grills / narrow heating lanes
08	**Double-Ring Power Burner**	Concentric cast rings / central opening / side inlet	Wok stations / side burners / outdoor kitchens

02 INFRARED & PORTABLE SYSTEMS

#	ARCHITECTURE	FORM	TYPICAL BBQ USE
09	**Ceramic Sear Burner**	Ceramic radiant face / metal housing / inlet assembly	Sear zones / premium gas grills
10	**Rotisserie Back Burner**	Elongated ceramic face / rear housing / project mounting	Rotisserie grills / rear burner positions
11	**Heavy-Duty Infrared Burner**	Large ceramic face / framed housing / integrated inlet	Rotisserie equipment / custom cooking systems
12	**Portable Burner Tube Kit**	Tube burner / support brackets / project connection set	Portable cooking systems / custom outdoor equipment

COMMON PROJECT OPTIONS

201 / 304 / 409 stainless steel · Natural gas / Propane · Custom dimensions / shape / construction

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TWO PLANTS. ONE IN-HOUSE CHAIN.

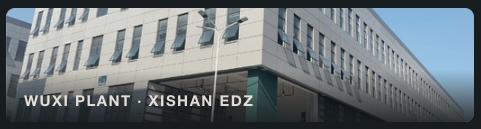
PROTECH designs, tools and manufactures outdoor-cooking equipment on its own lines in Jiangsu, China — laser cutting, CNC forming, metal spinning, hydraulic pressing, robotic welding and assembly all run in-house, under one quality chain.



STAMPING SHOP — HYDRAULIC PRESS LINE IN PRODUCTION

KEY EQUIPMENT ON SITE

- **CNC fibre laser** sheet cutting
- **CNC press brakes** — sheet bending
- **Metal spinning** lathes — domed bodies
- **4-column hydraulic presses**
- **6-axis welding robots**
- **Projection / spot welders**



WUXI PLANT · XISHAN EDZ

2 PRODUCTION BASES
WUXI · TAIZHOU

10,000 m²+ TWO PLANTS
COMBINED AREA

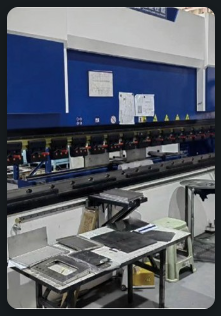
6 IN-HOUSE
PROCESS STAGES

IN-HOUSE PROCESS CHAIN

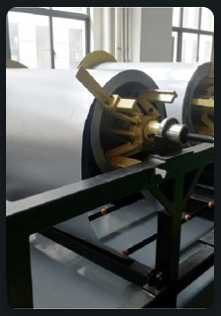
photographed on our own lines



01
Laser cutting
CNC sheet blanking



02
CNC forming
Press brake bending



03
Metal spinning
Seamless domed bodies



04
Hydraulic pressing
Deep-draw & die forming



05
Robotic welding
Repeatable seam quality



06
Assembly & QC
Projection weld, unit check

QUALITY SYSTEM

ISO 9001 quality management

Certificate scope on request

PRODUCT TESTING

ETL · CE · LFGB · REACH · RoHS · EMC

Issued per model and per sample — not a blanket claim

EXPORT MARKETS

North America · Europe · Asia · South America · Middle East · Africa · Australia

Serving brand owners and importers worldwide

OEM / ODM

Drawing & Design · Sampling · Mould Development · Custom Packaging

Project customization from concept to production

WHAT WE BUILD

- Kamado & egg grills
- Pizza ovens
- Pellet & temp-controlled grills
- Smokeless fire pits
- Tent & wood stoves
- Camping BBQ & racks
- Burners & igniters

HOW WE WORK WITH YOU

OEM / ODM Build to your drawing, or co-develop from concept.

Materials Stainless steel, cast aluminium, powder-coated steel.

In-house R&D, die design, tooling, production, delivery.

Testing Model-specific third-party reports on request.

Jiangsu Protech · Wuxi Protech
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Wuxi: Rongqiang Rd 6, Xishan EDZ · Taizhou: Health Industrial Park 12#, Gaogang

Combined plant area of the two facilities, per company records. Process photographs taken at our own facilities. Third-party test reports are issued per model and per sample — scope available on request.

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BRANDS THAT SELL OUTDOOR FIRE CHOOSE OUR BUILD.

Cast and fabricated metal parts, welded assemblies and finished units for outdoor-fire products — tooling, sampling and production on our own lines, to each buyer's drawing and inspection standard.

9	6	3	6
PARTNER BRANDS	COUNTRIES	CONTINENTS	PRODUCT LINES

BLAZE™ OUTDOOR KITCHENS + GRILLS

United States

Gas grills & outdoor kitchens

PIT BOSS

United States

Pellet grills & accessories

YOK™

United States

Kamado accessories

NAPOLEON

Canada

Gas grills & outdoor kitchens

BULL®

United States

Gas grills & outdoor kitchens

VEBA

Netherlands

Fire pits & kamado

FOX

United Kingdom

Portable BBQ

Rise Creation

Japan

Fire pits & portable BBQ

BLAU FISCH

Russia

Tent & wood stoves

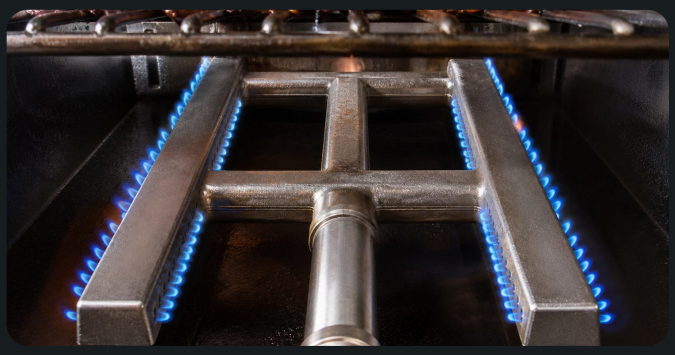
PRODUCT LINES WE BUILD

Cast & tube burners · Pellet igniters · Pizza ovens · Tent / wood stoves · Fire pits & kamado · Portable BBQ

Brand names and marks are the property of their respective owners and are shown for product-category reference only. Cooperation scope per signed PI/PO.

TURN YOUR BBQ DESIGN INTO A MANUFACTURABLE BURNER.

Tell us your application. We will develop a custom burner for your project.



CONTACT

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Pro-Tech Precision Machinery Co., Ltd.

Application · Interface · Fuel · Quantity

Outdoor Cooking. Your Flame, Our Build.