MULTIFIRE® Dual Fuel Burners
for gas or oil firing

Right: 2" MULTIFIRE® II Dual Fuel Burner with spark ignited pilot assembly and provision for UV scanner (scanner by others).
Left: 2" MULTIFIRE® II Burner with seal and support assembly.

- **Clean burning of light distillate fuel oils or most gaseous fuels** with low combustion air pressures
- **Wide turndown capabilities** on oils or gases promote faster bring-up times without temperature override
- **Maximum application flexibility** provided with five different sizes and “on-ratio” capacities up to 17,500,000 Btu/hr per burner
- **6" HO MULTIFIRE® Burner capable of firing #6 heavy oil** (maximum viscosity of 90 SSU)
- **Operate “on-ratio” or with “excess air”** to meet the specific demands of your combustion process. For air heating applications, most MULTIFIRE® Burners may be “overfired” without increasing burner size providing lower costs per Btu.
- **Alternate refractory block materials** for temperatures up to 3000°F (1649°C) to provide maximum cost effectiveness

MAXON®
CORPORATION 201 East 18th Street, P.O. Box 2068, Muncie, Indiana, 47307-0068. Phone: (765) 284-3304. FAX (765) 286-8394

MULTIFIRE® Dual Fuel Burners

Principle of Operation

MULTIFIRE® Burners incorporate a nozzle-mix refractory block design capable of "on-ratio" firing over a broad range of operating conditions.

The dual fuel capability indicates that MULTIFIRE® Burners can fire on either gas or oil, but not both fuels at the same time.

The illustration at right shows the **combustion air** being introduced through the burner body, surrounding the nozzle, and spinning out into the refractory block tunnel through machined air orifice ports on the face of the burner nozzle.

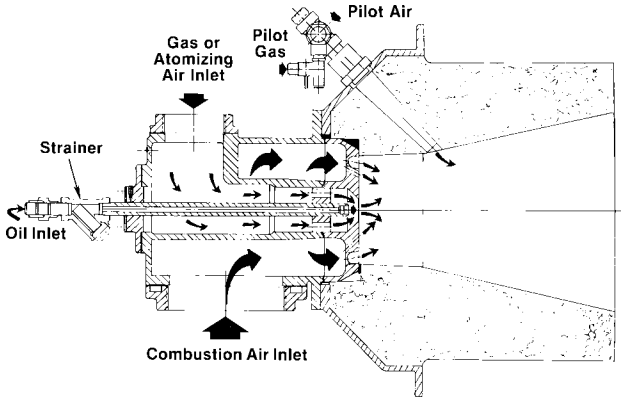
On gas firing, the gas enters the burner body and travels down through the inside of the gas nozzle. As the gas passes through the nozzle face, it is spun out into the refractory block tunnel where it is thoroughly mixed with the combustion air.

On oil firing, the oil is brought through the oil strainer into the oil tube/nozzle tip.

Atomizing air enters the burner body through the same opening that supplies gas for the gas firing option. The atomizing air attacks the stream of liquid oil at the face of the oil tube/nozzle tip.

In both the gas firing and oil firing options, a spark ignited gas pilot provides a stable pilot flame down through its own pilot tunnel in the refractory block to intersect and ignite the fuel/air mixtures coming out of the nozzle face.

Provision is made for a single UV scanner to monitor both gas pilot and main flame.



Typical for 2" – 8" size MULTIFIRE® Burners

Since MULTIFIRE® Dual Fuel Burners offer either the gas firing option or an oil firing alternative, the manifolding to the burner normally incorporates a manual 3 way-2 port selector cock to simplify switch-over to the alternate fuel firing. Automatic or remote operations have involved use of electric or pneumatic selector valves.

When used in conjunction with Maxon's MICRO-RATIO® Control Valves, a MULTIFIRE® Burner may be adjusted to fire "on-ratio" or with "excess air" throughout the firing range.

Maxon catalog bulletin 7000 describes MICRO-RATIO® Control Valves which throttle air and gas volumes to the MULTIFIRE® Burner.