



**Esso**  
Oil Burner

model **ECS**

*featuring the  
amazing  
new*

**economy clutch**

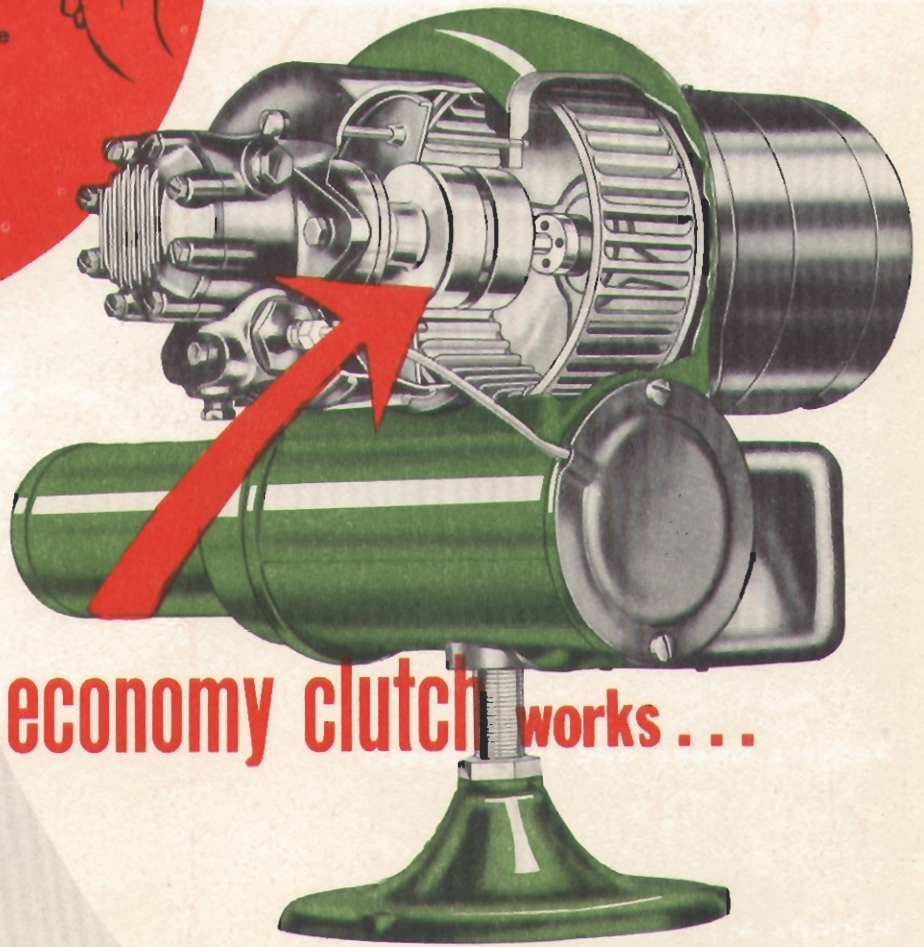


## try this match test

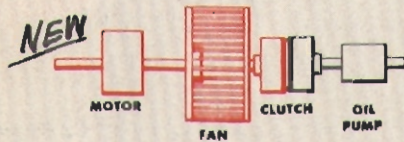
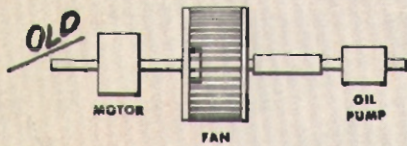
1. Strike a match — note the slight puff of smoke.
2. Then see how the flame finally burns clean.
3. Now blow it out and notice the slight wisp of smoke again.



A similar condition takes place in the starting and stopping of ordinary Oil Burners. Now read how the Economy Clutch eliminates smoke.



## here's how the economy clutch works...



*most...*

ordinary-type oil burners are operated by a single shaft from the motor. When the motor starts, fan and oil pump both begin simultaneously. You get a full flow of oil for a moment before sufficient air is delivered. Result — momentary poor combustion, a slight wisp of smoke and possibility of heat-stealing soot being deposited inside the boiler. The same thing happens when the motor stops — the last bit of flame, "suffocated" by lack of air, goes out in a puff of smoke.

*now..*

the Esso Oil Burner features a divided shaft with "Economy Clutch" between fan and pump. Motor and fan start first. Only when sufficient air is flowing, does centrifugal force cause the Economy Clutch to engage — and the fuel pump delivers the first oil.

*then..*

when the burner shuts off, the clutch disengages automatically so that the fan free-wheels at sufficient speed to provide proper combustion conditions for the very last drop of oil. Result — clean starts — clean stops — high efficiency — great economy.



*quiet . . . . clean . . . .*

*economical home heating . . . .*

with the new *Economy Clutch equipped* **Esso Oil Burner**

Now you get all the marvelous comforts and convenience of oil heating — plus brand new economy and operating efficiency. One of the most important contributions to home heating since the introduction of the household oil-burner is now at your service. It's the "Economy Clutch" — a patented feature of every new Esso Oil Burner . . . one of the many reasons why you should choose this burner.

Esso Oil Burners have always been considered high in dependable, satisfactory oil heating, but now with the new Economy Clutch they offer an even greater measure of economy and efficiency than ever before.

Esso Oil Burners are adaptable for installation in currently used steam, hot water or warm air furnaces which are in satisfactory condition.

**Reduces smoke and soot deposit**

. . . both signs of wasted oil! Combustion engineers claim only 1/32" of soot inside the boiler may cut heating efficiency 10%. Therefore, the clean flame of the Esso Oil Burner contributes to greater economy than ever before.

**Permits high combustion efficiency**

. . . which means heat from every gallon of fuel. Most ordinary burners must be adjusted so as to minimize smoke and soot when starting and stopping. This results in a lower general combustion efficiency. Eliminating the cause of smoky starts and stops makes it possible to set the Esso Oil Burner for high efficiency during the entire running period.

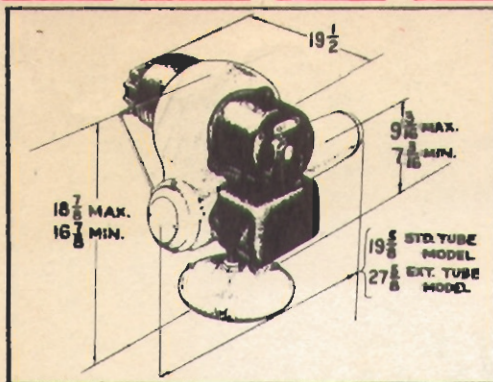
**Cuts vibration and pulsation**

. . . resulting in quiet operation from start to finish.

**Allows shorter operating cycles**

. . . Shorter operating cycles assist in securing closer temperature control. But shorter running periods mean more starts and stops. Ordinarily this means more smoke and soot deposits. But the Esso Oil Burner with its Economy Clutch provides clean operation and can be set for shorter operating cycles — giving more uniform heat, with less room temperature variation.





## RATINGS AND SPECIFICATIONS

This is a fully automatic, pressure atomizing type oil burner for steam or hot water heating systems, warm air furnaces, winter air conditioners, domestic hot water heaters and special industrial uses.

**APPROVALS:** Underwriters' Laboratories, Inc.; Commercial Standards CS-75-42; Mass. State Dept. of Public Safety; N. Y. Board of Standards and Appeals; State of Connecticut; City Fire Marshal, Philadelphia, etc.

### RATINGS

Current	Motor Speed	U. S. Min.	Capacity g.p.h. Max.	Radiation	
				Steam*	Hot Water†
AC 60 cycles	1750 r.p.m.	0.75	2.25	900	1440
AC 50 cycles	1450 r.p.m.	0.75	1.90	760	1210

\*Based on 400 sq. ft. per gallon.

†Based on 640 sq. ft. (150 BTU/sq. ft.)

\*\*Standard Burner.

Not available for any other current characteristics than those shown here.

**FUEL OIL:** Approved by Underwriters' Laboratories, Inc. for No. 3 Fuel Oil in accordance with Dept. of Commerce, Commercial Standards CS-12-40.

**FUEL UNIT:** Oil strainer, pump and pressure regulating valve combined in one unit.

### OIL STRAINER

Type: Cleanable cylinder screen in fuel unit.  
Material: Corrosion-resisting metal.

### PUMP

Type: Single-stage; internal gears; can also be furnished with 2-stage pump, at extra cost.

**ECONOMY CLUTCH:** Centrifugally operated, spring balanced. Precision machined aluminum drum, die cast zinc shoes, stainless steel hinge pins — lifetime lubricated bearings, high grade cork friction facing, flexible rubber coupling.

### PRESSURE REGULATING VALVE

Type: Single adjustment.  
Range: 75-150 lbs. per sq. in.

### NOZZLE HOLDER

Type: Special "G&B" design.  
Material: Brass.

### MOTOR

Size: 1/4 H.P.  
Type: Split phase, long hour duty; flange mounted.  
Speed: 1750 R.P.M.  
Built-in, thermally operated, manually reset; overload cut-out. Snap action starting switch.

### ELECTRICAL DATA

Starting Current: 17.0 amps.  
Running Current: 3.4  
Total Wattage: At 100 lbs. per sq. in. oil pressure — 155 watts.

### TRANSFORMER

Type: Continuous duty with mid-point of secondary grounded.  
Voltage: 10,000 volts.  
Amperage: 23 milliamperes (maximum).  
Wattage: 75 watts.

### IGNITION

Type: Continuous electric.  
Electrodes: One set — special heat resisting alloy; porcelain insulators.  
Cables: Triple insulated; snap-on connectors.

**RADIO FILTER:** Special transformer has internal barrier to prevent radio interference.

**CONTROLS:** Combustion control is a stack mounted relay. Operating controls, such as thermostat, etc., are of the low voltage type. The limit control is of the line voltage type.

### FAN

Type: Multi-blade; forward curved, balanced.  
Size: 5 1/4" diam. x 3 7/16" wide; 32 floats.  
Material: Cadmium plated steel.  
Direct mounted on motor shaft.

**AIR SHUTTER:** Type: Micro-adjustment, externally adjustable while burner is operating.

### AIR TUBE

Size: 3 3/8" diam. x 9" long.  
Also available in 17" length.  
Material: Heavy gauge steel.

### COMBUSTION HEAD

Type: Internal vane turbulator; single nozzle.

### WEIGHT — BURNER AND RELAY

95 lbs. in carton.

Specifications and ratings subject to change without notice or liability.