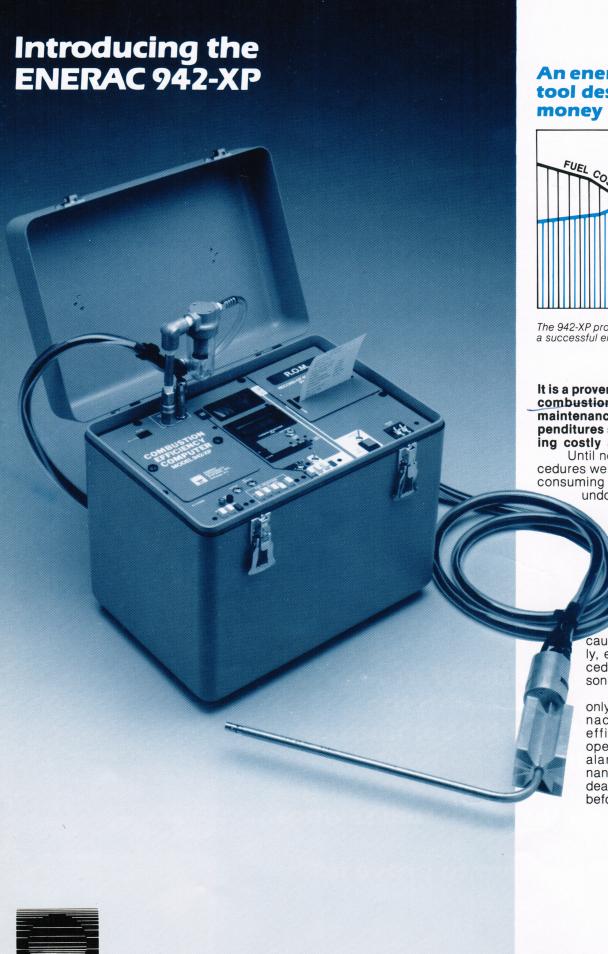
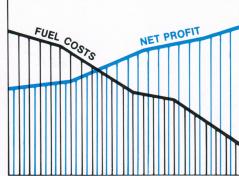


Fine tuning a furnace or boiler with the ENERAC 942-XP Combustion Efficiency Computer leaves you with something besides maximum fuel savings...

a record to prove it.



## An energy management tool designed to save money and down-time.



The 942-XP provides the data base necessary for a successful energy management program.

It is a proven fact: A regular program of combustion efficiency testing and maintenance will lower your fuel expenditures significantly while preventing costly and disruptive down-time.

Until now, combustion testing procedures were so complicated and time-consuming that they were often left undone or done inadequately.

The ENERAC 942-XP

The ENERAC 942-XP Combustion Efficiency Computer has changed all that. The ENERAC 942-XP makes testing, tuning and regular maintenance of your fuelburning equipment a simple, verifiable procedure that will be done be-

cause it can be done ... quickly, easily. A fast, accurate procedure that even nonexpert personnel find simple to perform. The ENERAC 942-XP not

only keeps your boilers or furnaces operating more costefficiently, it keeps them operating. Its automatic CO alarm will help your maintenance personnel identify and deal with potential malfunctions before they become serious.

### ENERAC's Printer: A systematic approach to energy management.



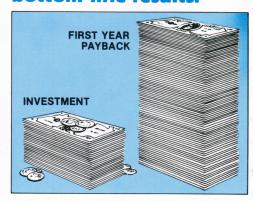
The 942-XP prints out time, date, boiler i.d. code, and all results of testing including actual combustion efficiency.

# Maintenance people appreciate ENERAC's easy-to-read display, push button simplicity.



Maintaining optimum boiler efficiency and reliability is a simple, error-free task that can be easily done by relatively unsophisticated personnel.

## Management people appreciate ENERAC's bottom-line results.



Reducing fuel expenditures by an average of 6% is just the beginning of the 942-XP savings story.

With the ENERAC 942-XP's Record-of-Maintenance (R.O.M.) printer, you can be certain that your program will be properly implemented. Now, with the 942-XP, you have a record of the gains actually achieved through regular maintenance—standardized data that makes facility-wide or company-wide cross-

comparisons easy and effective.

With the ENERAC 942-XP, your maintenance person can perform extraordinarily fast and accurate boiler or furnace analyses and tune-ups, making simple adjustments to achieve the highest combustion efficiency, and fuel economy, possible. And not only will the 942-XP provide all the necessary data, it will also provide print-out documentation of the date and time, the results—including combustion efficiency before and after—and the boiler's identification code. You'll know exactly how much fuel is being saved, and who deserves the credit!

The print-out is easily reviewed and evaluated on a time-available basis.

You'll know, beyond doubt, that regular fine-tuning of your fuel burning equipment with the 942-XP is cost-effective, whether on a daily, weekly, or monthly basis. And you'll have a record to prove how efficient the program has been.

## Your maintenance people will do a good job because they have the right tools.

With the simple act of inserting a probe in a stack, the 942-XP analyzes flue gases for the major determinants of combustion efficiency: % oxygen, carbon monoxide (in ppm), smoke, combustibles, net stack temperature and a calculated CO<sub>2</sub>. At the push of a button, it provides an instantaneous, continuous digital read-out of actual combustion efficiency using three parameters: 0<sub>2</sub>, temperature, and combustibles? It is, therefore, more accurate and more reliable than other units and procedures. It requires no special training, takes just minutes, and it's foolproof. No trial-anderror test methods. No human error.

As adjustments are made, improvement in efficiency is instantly displayed and documented, so maximum combustion efficiency is achieved . . . quickly, easily, accurately.

At barely 14 pounds, the battery operated 942-XP is easily portable so it can be taken from building to building, or transported as carry-on luggage. The unit can also be tailor-made to fit varying fuels and equipment. An inconel and aluminum probe capable of withstanding 2000°F comes standard.

## Your investment in the 942-XP should pay for itself in four months, or less.

Thousands of dollars in documented fuel savings annually is quite a testimonial. How many thousands, naturally, depends on your expected annual expenditure for fuel. A commercial user with a \$150,000 annual fuel budget, for instance, can expect savings sufficient to pay for the ENERAC 942-XP in less than four months?

And these are just fuel savings. A regular program of maintenance using the 942-XP can result in other savings that can amount to considerably more. Preventing facility down-time, for instance.

If you've already invested in an  $\rm O_2$  trim system, the 942-XP is absolutely essential. Your own personnel can use it to ensure proper calibration, as well as to detect the presence of CO (partially burned fuels) or combustibles (unburned fuels)—potentially dangerous and expensive problems not detected by  $\rm O_2$  trim systems.

It also gives you an in-house diagnostic capability to more effectively interact with your maintenance service.

For more information, including a free demonstration of the enormous money-saving (and time saving) potential of the ENERAC 942-XP in your facility, contact your local authorized E.E.S. distributor or call toll-free **1-800-645-7490**.

<sup>&</sup>lt;sup>1</sup>According to the Boiler Efficiency Institute, average savings of 6% can be expected with simple boiler maintenance. Significantly higher savings are not uncommon.

<sup>&</sup>lt;sup>2</sup>A 1% reading of combustibles indicates up to a 10% loss in combustion efficiency. Only ENERAC 942-XP, with its unique 3 parameter test, measures the effect of the presence of combustibles and calculates resulting efficiency losses.

<sup>&</sup>lt;sup>3</sup>Based on anticipated average annual savings of 6%.

### **Technical Specifications**

#### **Performance Specifications:**

	Parameter	Range	Resolution	Accuracy
	Temperature Rise	0-1999°F	1°	±2% of reading
	Combustibles	0-2.5%	0.01%	$\pm 0.01\%$ for 0.1% CH <sub>4</sub> in N <sub>2</sub>
	Carbon Monoxide	0-1999 ppm	1 ppm	±5% of reading ±1 unit
	Oxygen	0-25%	0.1%	±0.3% of maximum
	Carbon Dioxide*	0-20%	0.1%	±0.5% of maximum
	Efficiency*	0-97%	0.1%	±1% (75 to 90%)
	Printer:	Seiko <sup>TM</sup> printer with 3" thermal paper, 40 characters		
				printing speed.
	Power:	Rechargeable Ni-Cd batteries/110 volts AC/60 Hz.		
	Recorder outputs:			
	Smoke test:	oke test: x. stack temp: yrm-up time: sponse time:  Time required for a reading of 90% of final value. Temperature: 1.5 to 2 minutes; oxygen: 20 seconds; CO: 40 seconds; combustibles: 20 seconds.		
	nesponse time.			
	*			
		CC. 40 0000 ldg, combactibles. 20 occords.		

#### **Fuel Selections:**

#### Physical:

Dimensions: 13" x 9" x 12" H

Weight 14 lbs.

Material: Drawn aluminum case

\*Calculated



#### **Standard Accessories:**

- Water trap
- Smoke chart and smoke test paper

AC power cord.

 Probe: 12 inch inconel with aluminum handle and 10 feet of black rubber hose including protective polyethylene tubing.

#### Sensors:

Temperature: Chromel-Alumel (type "K") thermocouple

Combustibles: Semiconductor type

Carbon Monoxide: Sealed electrochemical cell, typical life 1–2 years Oxygen: Sealed galvanic fuel cell, typical life 6–8 months

**About E.E.S.** 

The acknowledged leader in the field, E.E.S. has provided computerized combustion analysis equipment for hundreds of the largest fuel-consuming organizations in the world.

"Thanks for a job well done...So far, I have checked various boilers, drying ovens, asphalt heaters, incinerators, inert gas generators, etc., and have an estimate of over \$252,000 fuel cost savings for year which says that I have paid for the ENERAC Combustion Efficiency Computer 100 times over its cost.."

Roy A. Miller

Corporate Maintenance Engineer Owens-Corning Fiberglas Corporation

"The use of this analyzer for boiler exhaust gas has resulted in an immediate reduction of 9 percent in our metered fuel costs."

#### H. Wimborne

Senior Project Manager, Operations Inspiration Consolidated Copper Company Energy Efficiency Systems Inc. is responsible for the first significant advance in combustion analysis technology in 150 years. E.E.S. has transformed combustion efficiency testing from an inaccurate, complex, rarely performed task to a modern computerized science.

"The laboratory's comments were, "its durability and versatility make it a good lab tool and an excellent field test service device". I am making the recommendation that we utilize this instrument for all of our field testing."

Lawrence M. Woodworth, P.E.

Conservation Program Management Group Department of Energy and Environment Brookhaven National Laboratory

E.E.S. combustion analyzers are the professional's choice because uniformly, they deliver reliable, accurate performance requiring no special expertise and a minimum of man-hours.

"Our service, adjustment and testing of fuel-fired equipment has not only become more accurate, but the ENERAC has saved innumerable man hours. The ENERAC has done all we expected and more to help us provide the best possible service to our energy-conscious clients."

James K. Gilfoyle Sales Manager Space Comfort Inc.



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