

# TITAN FT ECONOMIZER

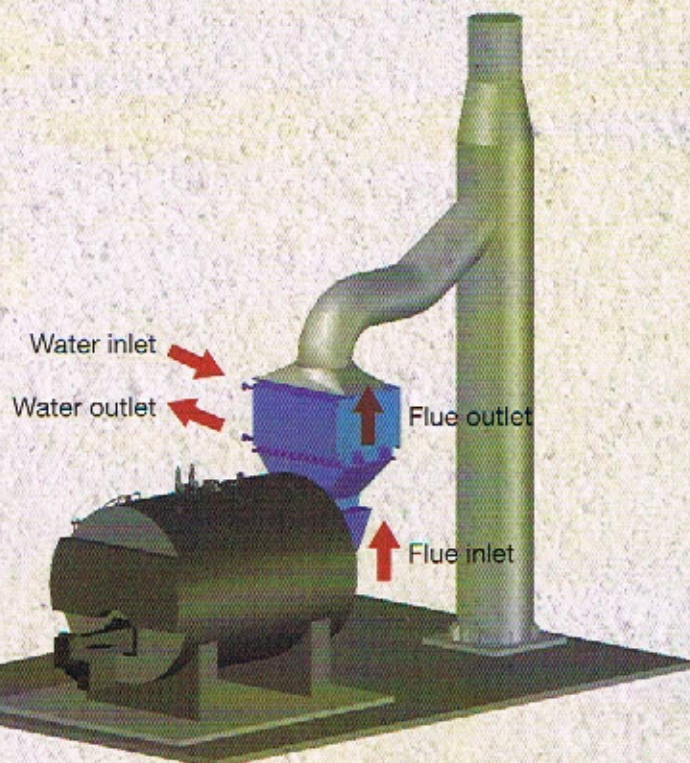


# WHAT IS AN ECONOMIZER?

An economizer is a Heat-Exchange device that absorbs the heat energy from a boiler's flue gas and uses that heat energy to increase the temperature of feed-water that is fed into the boiler.

When the temperature of feed-water into a boiler is increased, less energy is required by the boiler to produce a given quantity of steam.

The result? Less energy required to fire a boiler means more cost savings for a boiler operator.



## FEATURES

- Suitable for Natural Gas or LPG-fired boilers
- Finned tube design to enhance absorption of energy
- By-pass dampers available as option for boilers that are dual-firing
- Can be retrofitted to Mechmar range of fire-tube boilers OR other boiler brands
- Approved by Department of Safety and Health, Malaysia (JKKP)
- Compact design
- Thermal Efficiency gain of 5% is possible

## BENEFITS

The annual fuel bill for a typical industrial plant will far exceed its original capital cost. Clearly, every 1% of saving is very significant. Around 4%-6% of fuel bill can be saved by Mechmar Economizer even on efficient modern packaged boiler plant – depending on fuel, working pressure, etc. The true savings increase in direct proportion to the fuel price which is continues to increase ahead of inflation rates.

### Operational Benefits

- **Protects and Prolongs boiler operating life.** Pre-heated water reduces “racking and thermal stresses” caused by extreme water temperature differential in boiler.
- **Easier and Faster steam generation.** By using pre-heated feed-water, boiler able to reacts more readily to peak load.



## Economic Benefits

- Thermal Efficiency gains of 5% directly translate into less energy needed to fire boiler

### **COST SAVINGS & SMALLER BILLS**

- One time investment that will continue to offer cost savings for a boiler operator for many years.



### **Savings in Perspective**

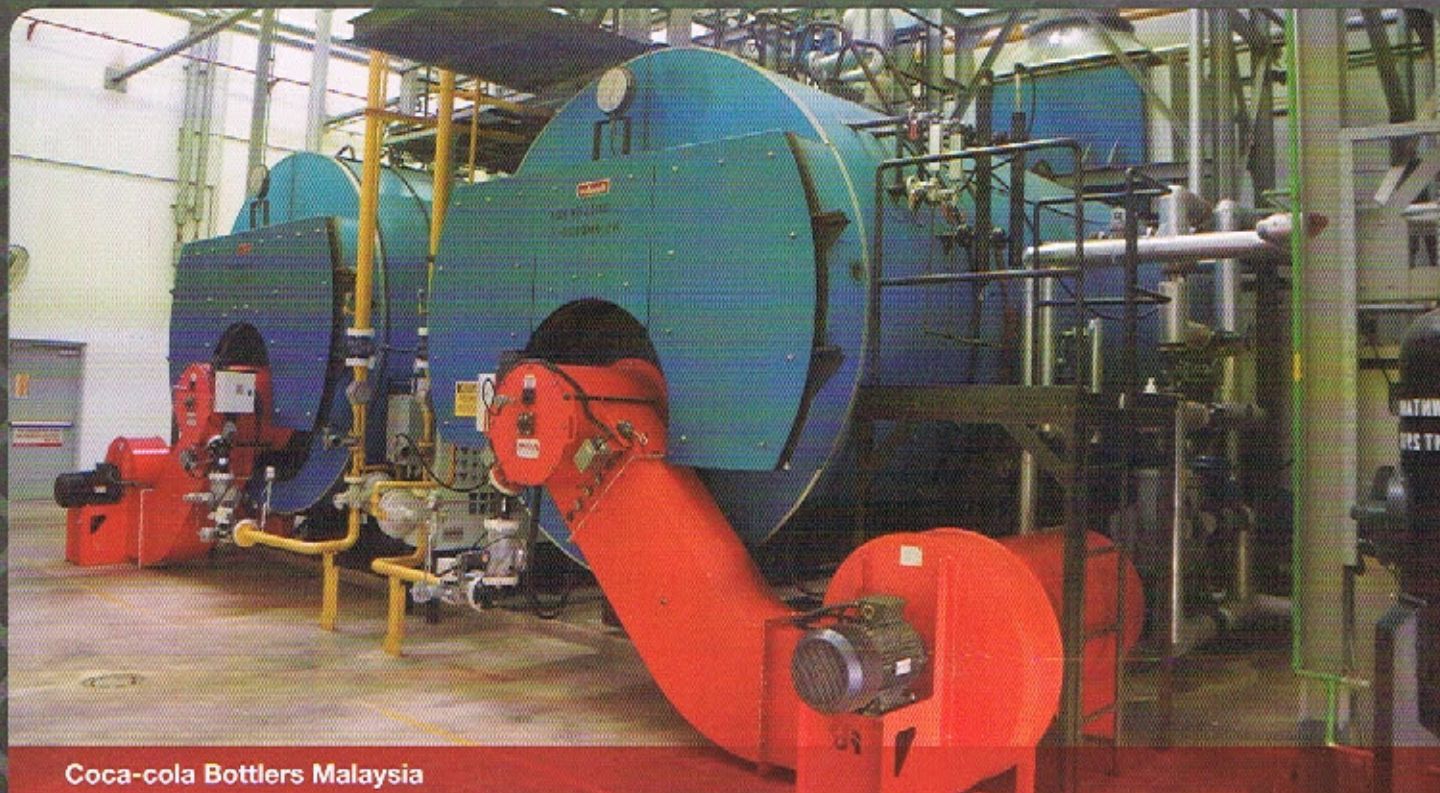
Is it worth to invest a Mechmar Economizer into your boiler room? Let's study the saving comparison analysis below. This calculation is base on a **35,000 pph** package boiler @ **150psig** operating pressure. Assuming Natural Gas Fuel cost **RM0.60** per m3 based on **RM17** per mmBtu. A Typical plant operates at **4800 hr** per year (12hr/day, 6 days/week, 50 week/year).

Fuel consumption – before install economizer	1166 sm3/hr
Fuel consumption – after installed economizer	1098 sm3/hr
Fuel Saved	68 sm3/hr
Fuel Cost Saving per hr (Rm)	Rm40.80
Fuel Cost Saving per year (Rm)	Rm146,880
Payback period (months)	12 months

**An Economizer** installed would save in the range of 5% of fuel requirements. A 5% saving from 35,000 pph Economizer would bring you saving of a sum of **Rm146,880.00!** Taking into consideration the annual savings and initial capital layout we are ensured of a payback period between 12-15 months including installation.

*Note:- Kindly take note that the conditions of each individual boiler plant may vary and the above analysis is for illustration of the potential benefits. Also take note that boilers operating efficiency may decline over time due to the buildup of soot and dirt. We therefore strongly recommend an overhaul of a boiler before retrofit with an economizer so that its full benefits can be obtained.*





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MECHMAR COCHRAN BOILERS (M) SDN. BHD.  
NO. 1 Jalan Perunding U1/17, Sekyen U1,  
Hicom-Glenmarie Industrial Park, 40150 Shah Alam,  
Selangor Darul Ehsan, Malaysia  
Tel : +603 5569 3688 Fax : +603 5569 1368  
Email : mcbse@mechmar.com.my

MECHMAR COCHRAN BOILERS (M) SDN. BHD.  
Lot 14, Jalan Timah, Pasir Gudang Ind. Est.,  
81700 Pasir Gudang, Johor, Malaysia  
Tel : +607 251 3832/3633/3634 Fax : +607 252 5494  
Email : mcbpg@mechmar.com.my

##### INDONESIA

PT MECHMAR JAYA INDUSTRIES  
Kawasan Industri Medan,  
JL. K.L. Yos Sudarso KM. 10.5  
Medan, Indonesia  
Tel : +62 61 685 0306 Fax : +62 61 685 0307  
Email : ptmj@mechmar.com.my

PT MECHMAR JAYA INDUSTRIES  
Gedung Jamkrindo 9th Floor, JL. Angkasa Blok B-9 Kav.6  
Kota Baru Bandar Kemayoran, Jakarta - Pusat 10610, Indonesia  
Tel : +62-21-3019 1828 / 38 // +62-21-6586 7931 / 32  
Fax : +62-21-654 2567  
Email : ptmjkt@mechmar.com.my

##### SRI LANKA

MECHMAR COCHRAN LANKA (PVT) LTD  
543, Negombo Road, Wattala, Sri Lanka  
Tel : +0094 11 294 7182 // 0094 11 481 8896  
Fax : +0094 11 498 1982  
Email : mechmar@sl.lk / wicks@mechmar.lk

**TOLL FREE**  
**1-800-88-3030**