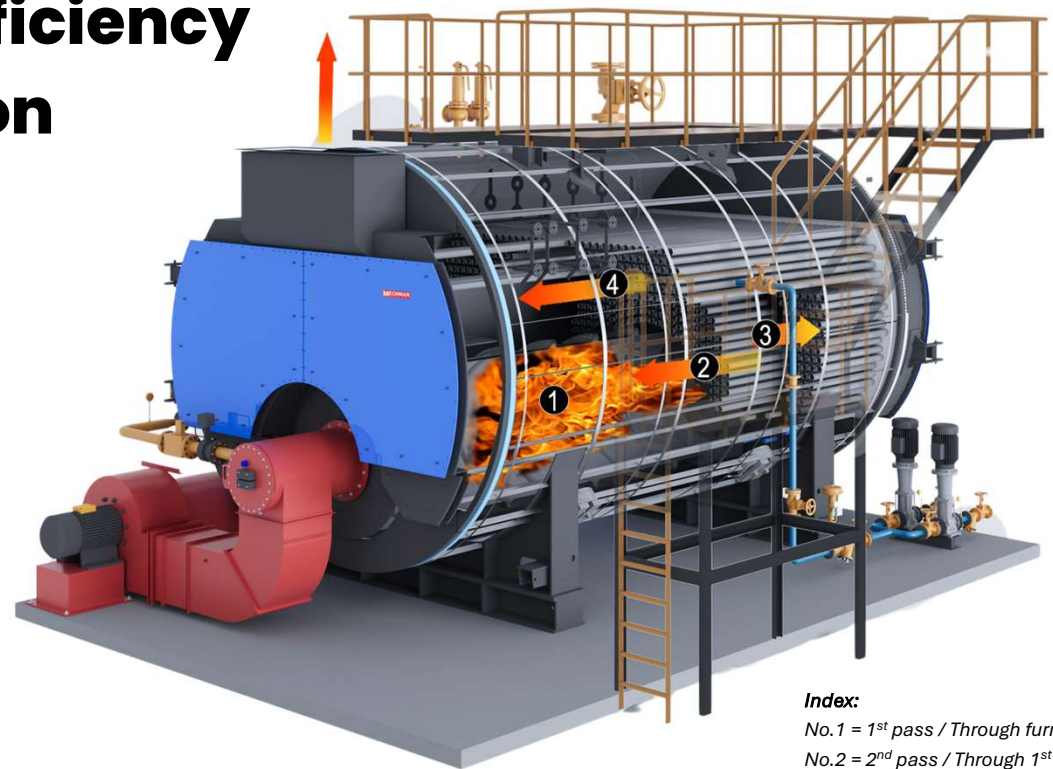




# Titan MB Four-Pass Steam Boiler: Leading Innovation in Efficiency for Liquid Fuel Application

*The first local manufactured 4-pass boiler  
in Malaysia by **Mechmar Boilers***



**Index:**

No.1 = 1<sup>st</sup> pass / Through furnace

No.2 = 2<sup>nd</sup> pass / Through 1<sup>st</sup> pass tubes

No.3 = 3<sup>rd</sup> pass / Through 2<sup>nd</sup> pass tubes

No.4 = 4<sup>th</sup> pass / Through 3<sup>rd</sup> pass tubes

# Pioneering in Excellence Boiler Manufacturing

*About Mechmar*



## **Industry Leaders Since 1970s**

Setting the benchmark in boiler manufacturing with a legacy of quality and innovation.



## **Malaysia's First 4-Pass Boiler Manufacturer**

Innovating in efficiency and reliability



## **Proven Trust with Major Contracts**

Recently secured number of significant orders for Titan MB Four-Pass Boiler.



## **Continuous R&D for Peak Performance**

Advancing boiler efficiency through ongoing research and innovation.



# Why Choose the Titan MB Four-Pass Boiler?

- **Increase in efficiency:** Up to 2% higher than the traditional 3-pass design, for both liquid & gas fuels.
- **Optimized Design:** Optimized for liquid fuel applications where economizers are not recommended.  
Ensuring significant fuel savings.
- **International Standards:** Designed and manufactured to international standards to meet global benchmarks in safety and performance

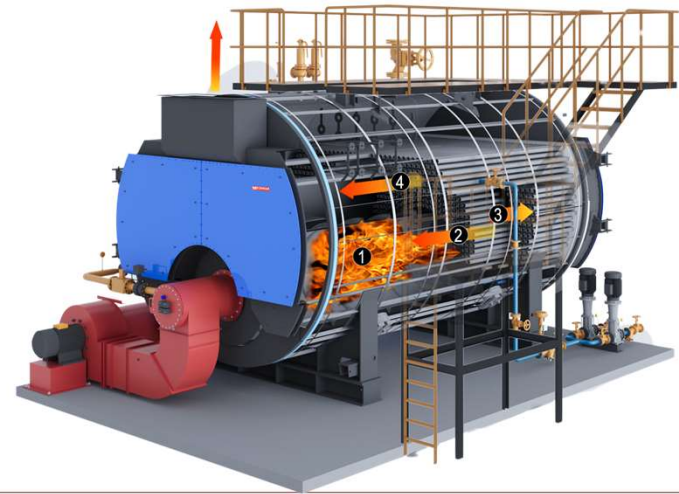
## How is the Titan MB Four-Pass Boiler Physically Different?

*Additional Row of Tubes: The four-pass design adds just one extra row of tubes compared to the three-pass model.*

3D internal flue gas flow for 3-pass



3D internal flue gas flow for 4-pass



# Calculate your fuel savings

## Fuel Savings Formula:

**Estimated Fuel Cost Savings (Fuel Price/year) =**

Savings in Fuel (L) × Unit Rate of Fuel (Fuel Price/L) × Operating Hours × Operating Load (%)

Operating Hours	Operating Load (%)	Fuel Savings (L/Hr)	Unit Fuel Rate (RM/L)	Annual Fuel Cost Savings 8400 HR/Year (RM)
Hrs	%	L/Hr	RM/L	Estimated Savings

\* Kindly refer to attached excel sheet for Fuel savings per annum estimate .Fuel cost to be filled by respective sales person in charge as per specific prevailing rate at respective country and operating hours on case to case basis

# Project References Four Pass Steam Boiler

- Type of Boiler: Steam Boiler (MFO)
- Model: MB4000/150
- Capacity: 18,144 kg/hr
- Location: Unitata, Malaysia

Operating Hours	Operating Load (%)	Fuel Savings (L/Hr)	Unit Fuel Rate (Rp/L)	Annual Fuel Cost Savings 8400 HR/Year (Rp)
24 Hrs	100%	22.09 L/Hr	Rp. 15.000	Rp.2.783.340.000



# Project References **Four Pass Steam Boiler**

- Type of Boiler: Steam Boiler (LFO) / Under fabrication
- Model: MB1750/150
- Capacity: 7,938 kg/hr
- Location: Spices and Seasoning, Malaysia

Operating Hours	Operating Load (%)	Fuel Savings (L/Hr)	Unit Fuel Rate (Rp/L)	Annual Fuel Cost Savings 8400 Hr/Year (Rp)
24 Hrs	100%	11.63 L/Hr	Rp. 15.000	Rp. 1.465.380.000



# Project References Four Pass Steam Boiler

- Type of Boiler: Steam Boiler (Diesel)
- Model: MB800/150
- Capacity: 3,629 kg/hr
- Location: AQ Foam, Malaysia

Operating Hours	Operating Load (%)	Fuel Savings (L/Hr)	Unit Fuel Rate (Rp/L)	Annual Fuel Cost Savings 8400 Hr/Year (Rp)
24 Hrs	100%	4.65 L/Hr	Rp. 15.000	Rp. 334.800.000

