



## PMI TECHNOLOGICAL SOLUTIONS FOR PALM OIL & OLEOCHEMICAL INDUSTRY PROCESSES

OUR INNOVATIVE AND CUSTOMIZED  
FILTERS HAVE BEEN SUCCESSFULLY  
UTILIZED IN AN EXTENSIVE RANGE  
OF APPLICATIONS INCLUDING THE  
EDIBLE OIL AND OLEOCHEMICAL  
INDUSTRIES.

### PALM OIL REFINERY

Crude Oil Filtration	- Vertical Leaf Filter
Bleached Oil Filtration	- Vertical Leaf Filter
	- Pulse Tube Filter
Winterized Oil Filtration	- Membrane Filter Press
	- Horizontal Pressure Leaf Filter
Hydrogenated Oil Filtration	- Vertical Leaf Filter
	- Pulse Tube Filter
	- Cricket Filter
Heel Filtration	- Pulse Tube Filter
	- Silumin Plate Filter Press
Degumming & Neutralization	- Separator
Polishing Filters	- Cartridge Filter
	- Single/Multi Bag Filter

### PALM OIL FRACTIONATION

Olein & Stearin Separation	- Membrane Filter Press
	- Belt Filter

### SPECIALTY FATS

Oleic/Stearic Acid	- Membrane Filter Press
Solvent-extracted Oils	- Gastight Vacuum Belt Filters

### OLEOCHEMICALS

Nickel Catalyst Filtration	- Vertical Leaf Filter
	- Pulse Tube Filter
	- Silumin Plate Filter Press
Glycerin Filtration	- Recessed Chamber Filter Press

### BIO-DIESEL

Pre-treatment	- Vertical Leaf Filter
	- Pulse Tube Filter
Winterization	- Horizontal Filter Press
Methyl Ester/Water Separation	- High Speed Centrifuge



PMI is a specialist provider of technological solutions in:



PMI semi and fully-automatic control filtration systems optimize and visualize the entire process, providing expert technical support to even the simplest filter model. We provide comprehensive technical sales, testing and maintenance services, assist with plant design and ensure optimum filtration efficiency and reliability. Our diverse range of filter presses are used worldwide for a variety of applications, including the palm oil industry.

## FILTRATION TECHNOLOGY



PMI agitators have a wide range of applications and are a vital component in industrial processes. Designed to provide effective solutions to fulfill different needs, our customized equipment offer the highest levels of technological know-how and engineering experience.

## MIXING TECHNOLOGY



## STEEL WORKS

Manufactured in accordance with the strictest of international industry standards, our products have been delivered for use worldwide in various industries, from food processing to engineering-related and recycling industries.

Together with our international partners, we are one of the largest suppliers of filtration equipment for the palm oil and oleochemical industries worldwide.







PMI produces membrane filter presses, recessed plate filter presses, plate and frame filter presses for a wide range of applications, including those in the chemical, food, mining and waste water industries.

## OUR MEMBRANE FILTER PRESSES

*MFP 1500 X 1500mm plate size, 30bar squeeze pressure under construction for palm bio-diesel.*



*MFP under construction of 1500 X 2000mm plate size and 6 bar squeeze pressure for olein stearin filtration. Fully-automated with Human-Machine Interface system.*

*MFP 1500 X 1500mm plate size, 16 bar squeezing pressure for fractionation process in China.*

*Our hydraulic system is designed for efficient and easy maintenance.*





## VERTICAL/HORIZONTAL PRESSURE FILTERS



Our **VERTICAL LEAF FILTERS** are widely used in the Edible Oil and Oleochemical industry. The filter elements comprise a stainless steel screen with a top screen of either 24 X 110 Dutch Weave, PZ 80S Panzer Weave or KPZ 55 Köper Panzer Weaver, depending on the application. Generally, our Vertical Leaf Filters have up to 125 sq meters of filter area per filter.

### PULSE TUBE FILTERS

use seamless filter sleeves covering the main stainless steel filter tubes. Predominantly



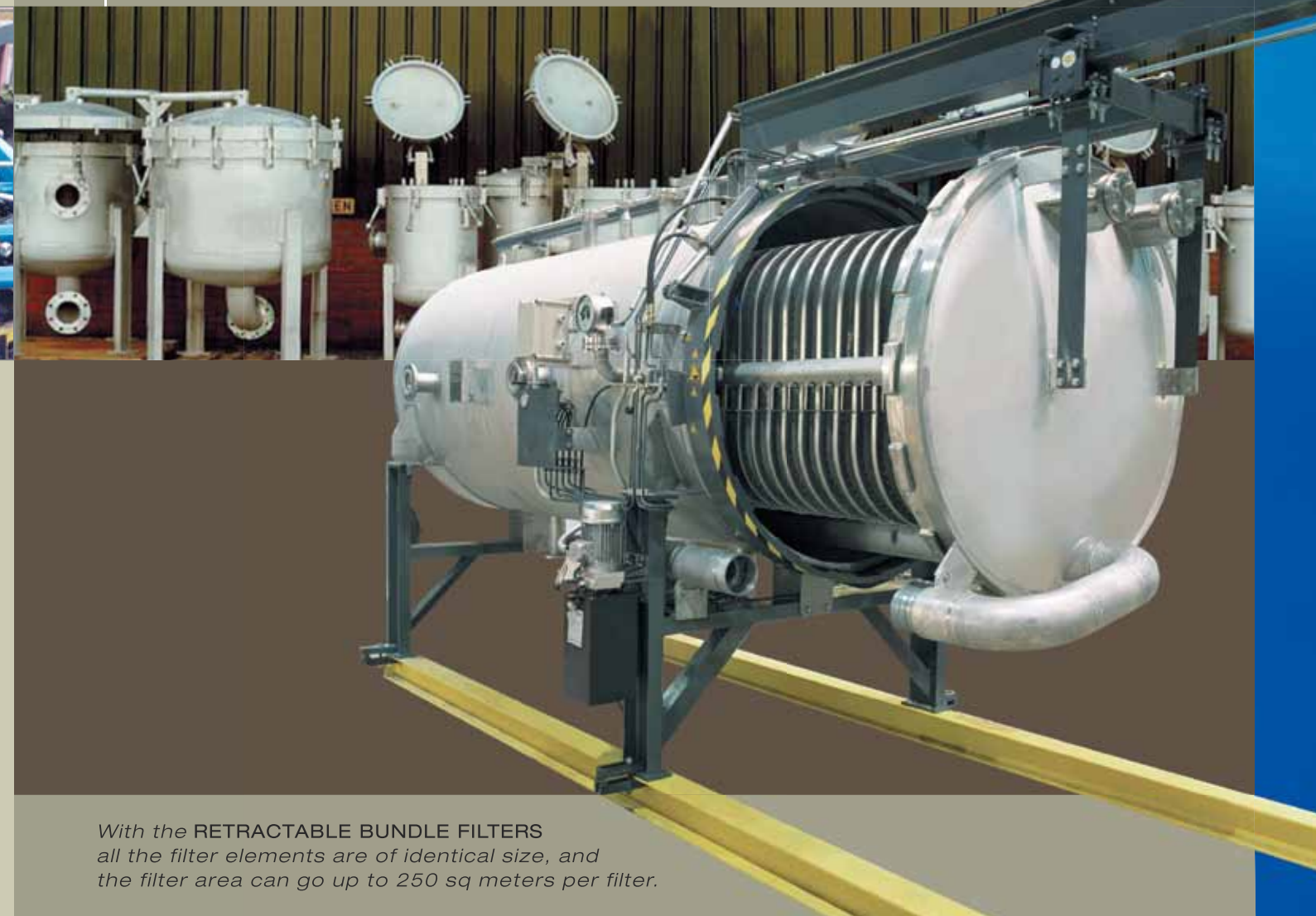
used for heel filtration, nickel catalyst filtration and as an oil polishing filter operating on a continuous basis. The filter area can be up to 100 sq meters per filter, either in carbon steel or stainless steel vessels.

We are the regional manufacturer and supplier of Vertical Leaf, Retractable Bundle, Pulse Tube and Multiple Bag filters, suitable for Edible Oil and Oleochemical industry processes in:

- Crude Oil Filtration
- Bleach Oil Filtration
- Winterized Oil Filtration
- Nickel Catalyst Filtration
- Pre and Post Treatment
- Polishing Filtration

With our experience, we are continuously striving to develop new and innovative applications not only for the Edible Oil and Oleochemical industries, but for other industries as well.

**MULTIPLE BAG FILTERS** are usually used for the polishing process, utilizing replaceable filter bags. We have both single bag models as well as multiple bag designs. An alternative would be our Pulse Tube Filter or cartridge filter, for the polishing process.



With the **RETRACTABLE BUNDLE FILTERS** all the filter elements are of identical size, and the filter area can go up to 250 sq meters per filter.



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Testing of 2m X 2m presses in our facility.



Assembling of  
2m X 3m presses.



Several 2m X 2m  
presses during the  
assembly stage at  
our facility.

# QUICK DISCHARGE FILTERS (QDF)

Quick Discharge Filters (QDF) can be used in many applications, including the Edible Oil industries, Mining, Chemicals, Food and many others where its features may be utilized to great advantage.

Key benefits of the QDF include:

- Quick discharging of the filter cakes, typically in the range of 60 to 100 chambers dependent on the opening between plates, allow the filter cake to discharge efficiently.
- Multiple short hydraulic cylinders (pressure cylinders) facilitate easy maintenance.
- The multi closing cylinders allow a more even closing pressure to be achieved, especially when large plates are utilized.
- The QDF Skeleton can be adapted for various applications and is easily configured to accommodate various plate designs. If the Polypropylene (PP) plates are not utilized for filtration, they may be used for heat transfer applications as well. PMI's current program delivers equipment that is suitable for PP plate sizes of 2m X 2m and 2m X 3m, and can accommodate lengths in excess of 220 chambers.



Delivery of the  
2m X 3m press  
skeleton to our  
customer's factory.



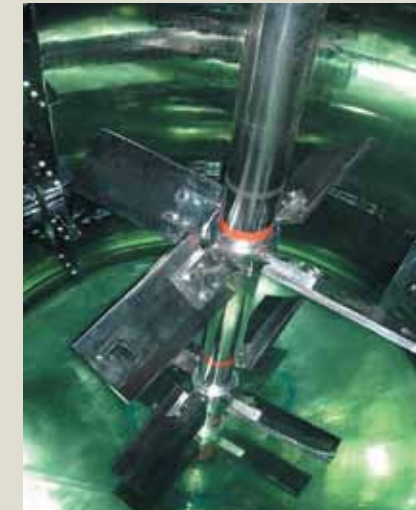


PMI agitators are widely-used in the general industry for blending, dispersion, suspension and where heat transfer efficiency either for heating or cooling is required.

# OUR AGITATORS



Side entry agitators widely used in edible oil tank farms, bulking installations and other tank farms as well



Different impellers for different applications:

- hydrogenation •
- bleached oil •
- degumming •
- neutralization •
- storage tanks •



PMI agitators in a palm oil refinery can be installed either in a pressurized or non-pressurized tank

Side Mounted agitator mounting positions for blending



Top Mounted agitators for cocoa liquor production





# STEEL WORKS

Our expertise in this field includes designing, fabricating and installing steel works for pressure vessels, tanks, piping, specialized food processing equipment and a range of engineering-related industries – including the cocoa industry, oil & gas, power stations, waste water treatment plants, the food industry and used oil recycling plants.



## OUR PRODUCT RANGE INCLUDES:

- Pressure Vessels
- Tanks
- Heat Exchanges
- Reactors
- Columns
- Silos
- Filters
- Conveyors and Hoppers
- Reformer Ovens
- Platforms
- Skids
- Ducting
- Ljungstrom Gas Air Preheater
- Regenerative Thermal Oxidizer
- Cor-Pak Thermal Oxidizer
- Site Installation
- Piping works
- Project Management

*Our excellent track record and innovative skills in steel works have attracted many to our growing list of international clients. We continue to supply to established international engineering companies in Thailand, Indonesia, Singapore, China, Australia and also to Europe.*

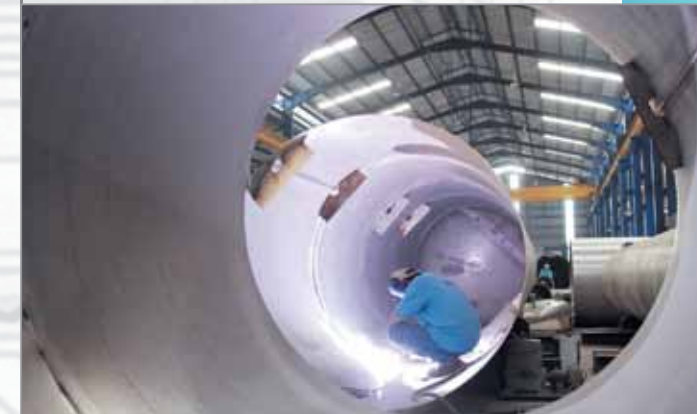


PMI

# STEEL WORKS

ONE OF OUR FACILITIES

Our pressure vessels are manufactured with JKKP approval when required.



Our stringent quality checks ensure our quality delivery.

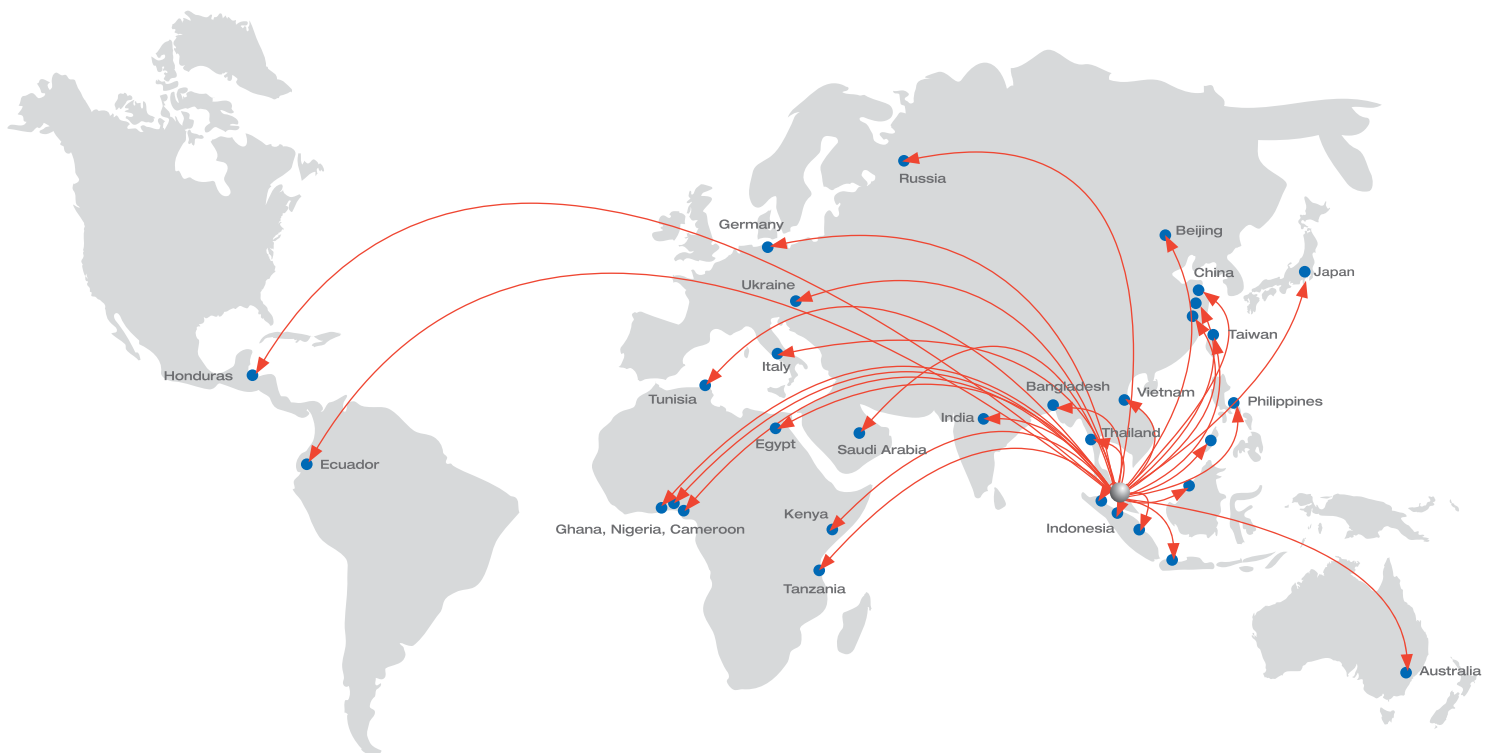
Our pressure vessel designs are in accordance with the ASME Code and construction materials can be Carbon Steel, SS304, SS316 and Duplex materials.



# OUR COMMITMENT TO GLOBAL SERVICE SUPPORT

We provide comprehensive support services to our clients all over the world. This includes year-round maintenance, prompt delivery of spare parts, site commissioning and installations, and – we take pride in doing our part in ensuring a successful relationship with our business partners.

- SITE LOCATION  
● PMI HEADQUARTERS, SHAH ALAM, MALAYSIA



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Company No. 154042-D

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Fax: (603) 5569 3131  
Email: info@pmi-group.com

**PMI-Technology Sdn Bhd**  
Company No. 568062-K

#### Manufacturing Facilities

- No. 3, Hala Jati 10, Taman Meru Industrial Estate, 30020 Jelapang, Ipoh, Perak D.R., Malaysia.
- Lot 2, Kwsn Perusahaan Tmn Meru 3B, Jln Jelapang, 30020 Jelapang, Ipoh, Perak D.R., Malaysia.
- Lot 11004, 4 3/4 Miles, Jalan Lahat, 31500 Lahat, Perak D.R., Malaysia.



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