



# Plus Point Engineering

Your Ever Reliable Partner in Filter Press Technology

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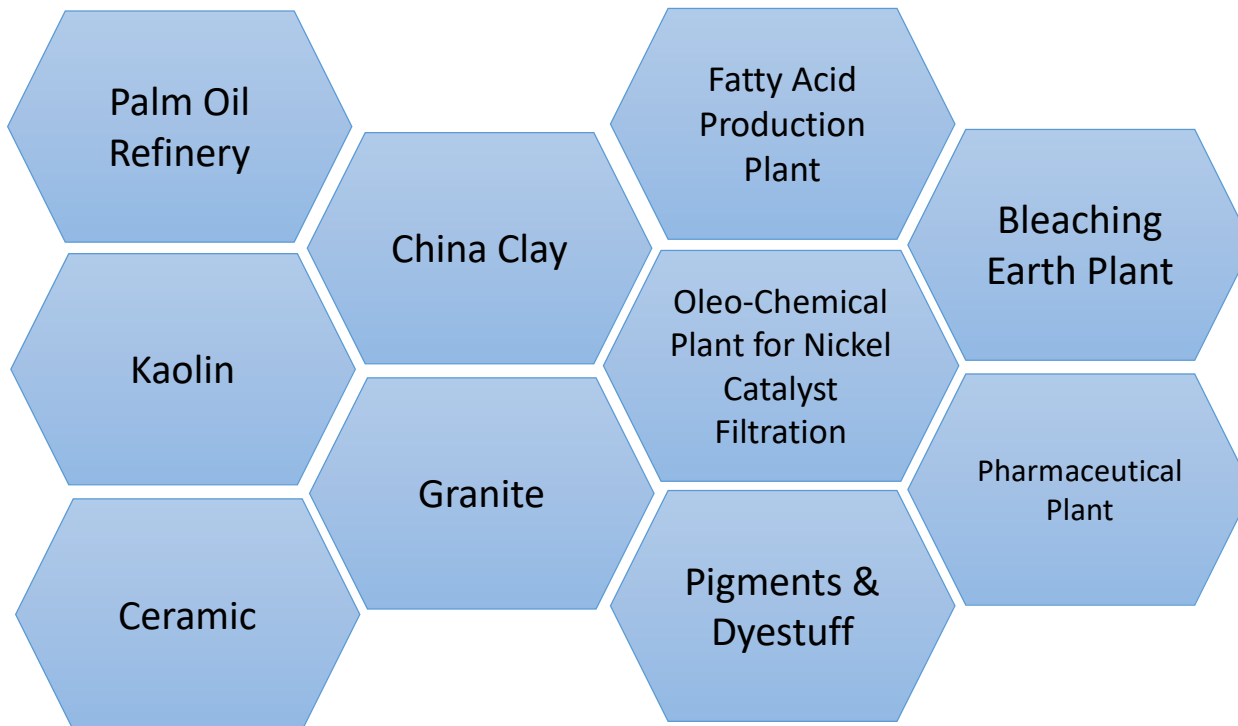
## PLUS POINT ENGINEERING

- Incorporated in 2005
- Has grown to be a major supplier and manufacturer in filter press within South East Asia.
- Vast experience in solids/liquid separation.
- Design and develop high quality, cost-effective filter press machinery and solutions in a wide range of industries.

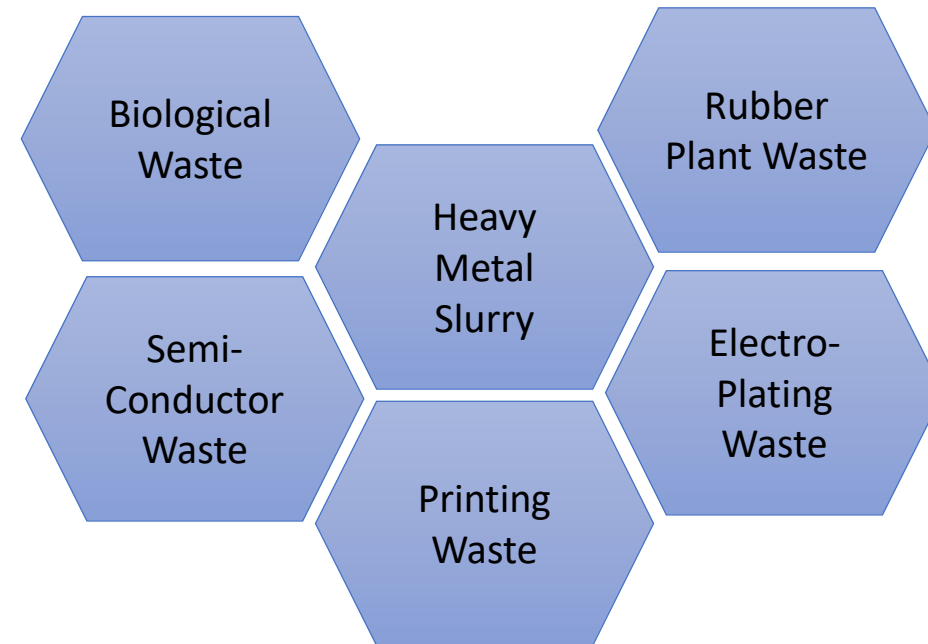
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# INDUSTRIES WITH USAGE OF FILTER PRESS

## Process and Production



## Industrial Waste Water Treatment Plant



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## OUR GOAL

-  To design and develop high quality, cost-effective filter press machinery and solutions.
-  To help customer to achieve production goals, with solutions appropriate for the market, application, and set of operating conditions
-  To provide customers with a customized and hassle free filtration system that suits its customers' needs
-  To optimizes The Return of Investments for customers

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# PLUS FILTER PRESS

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## PLUS FILTER PRESS

### INNOVATING SOLUTIONS IN FILTRATION TECHNOLOGY

- Snatch & Latch Plate Shifter with Filter Cake Vibrator
- Motorized Plate Shifter
- Motorized Drip Tray
- Fully Automated Feeding System with Complete With Process valve, Pressure Transmitter
- Control Panel with built in Touchscreen

### PROVEN AND TESTED RELIABILITY IN VARIOUS INDUSTRIES

- Namely industrial waste water, clay, palm oil industry and many more.
- In Malaysia and South East Countries like Singapore, Philippines and Indonesia.

### YOUR EVER RELIABLE PARTNER IN FILTER PRESS TECHNOLOGY

- Optimized output in terms of filtrate or filter cake
- Savings in output and operating cost

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## TYPES OF PLUS FILTER PRESS



**PLUS Chamber Filter Press**



**PLUS Membrane Chamber Filter Press**

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# PLUS CHAMBER FILTER PRESS

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## OVERVIEW



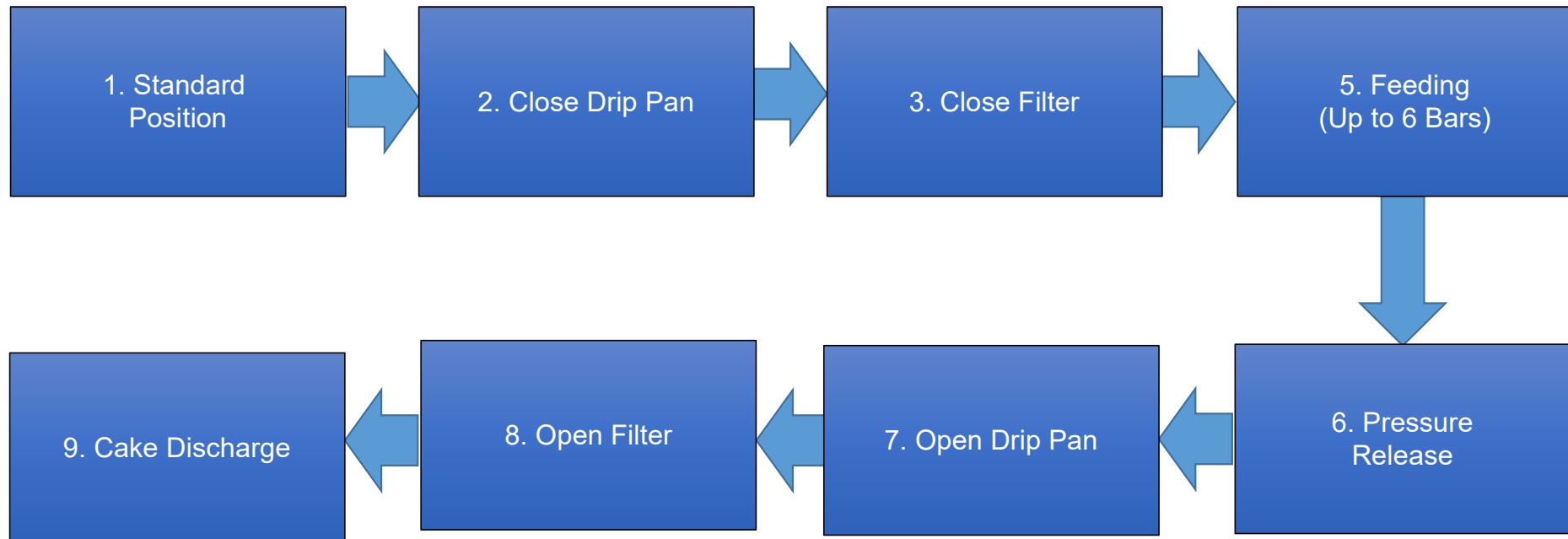
**PLUS Chamber Filter Press With Manual  
Hydraulic Pump**



**PLUS Chamber Filter Press With Electro-  
Hydraulic Pump**

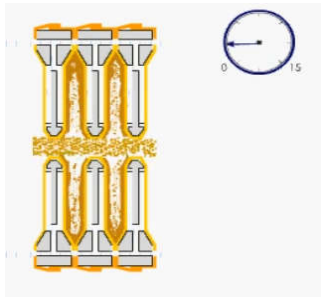
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# PROCESS STEPS

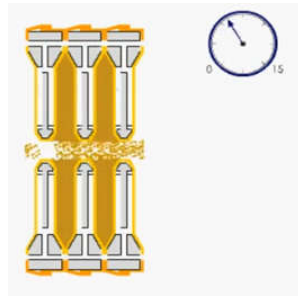


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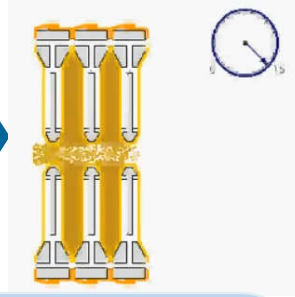
# GENERAL PRINCIPLE



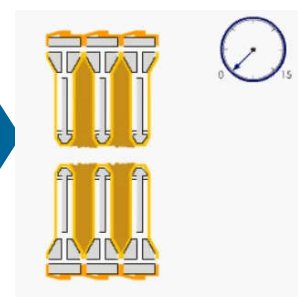
- The filter press consists of a series of chamber plate.
- Hydraulic force will hold these plates together .
- Slurry is pumped into the filter press under pressure.



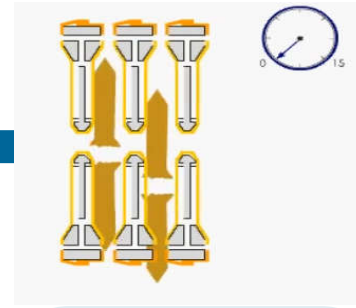
- Filter chamber is completely filled with filter cake.
- Filter cake is dewatered.
- Feeding pressure reaches it maximum value.



- Feeding pressure reaches its maximum pressure.
- Only minimum throughput.
- Maximum pressure is maintained for a determined time.



- Filter chamber has fallen to 0.
- Core blowing will take place
- Filtrate channel are emptied.



- Pressure is release.
- Drip Pan and Filter Press is Fully Opened.
- Filter Cakes are ready to be discharged.

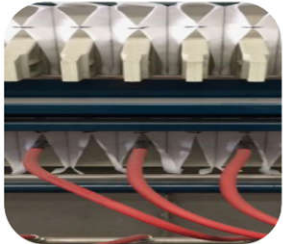
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# PLUS MEMBRANE CHAMBER FILTER PRESS

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# OVERVIEW



Alternate Chamber Plates and Membrane Plates



Sludge Inlet



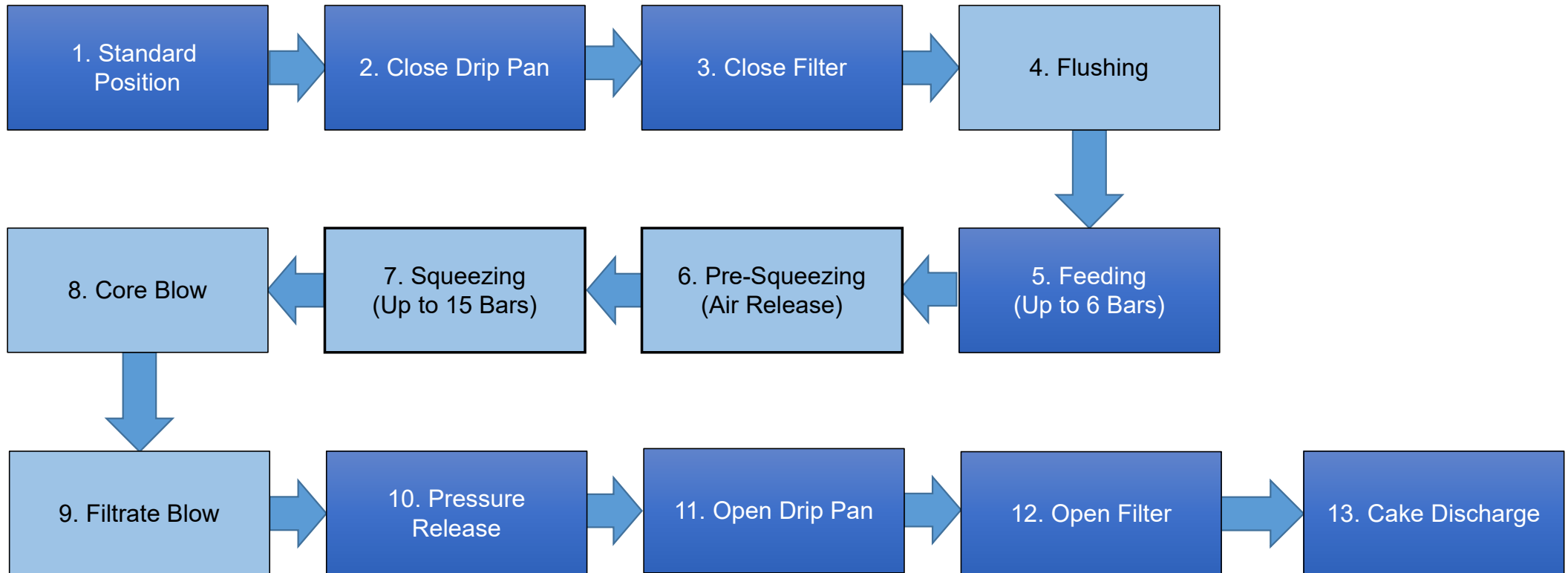
Motorized Plate Shifter



Water Squeezing Piping  
(Up to 15 bars)

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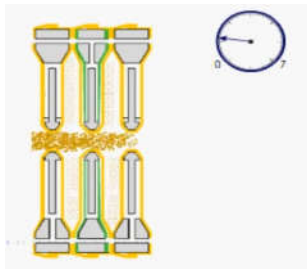
# PROCESS STEPS



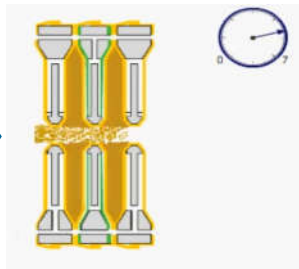
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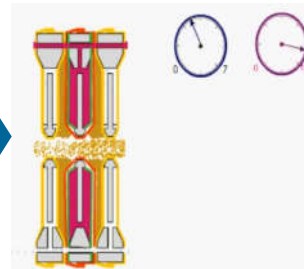
# GENERAL PRINCIPLE



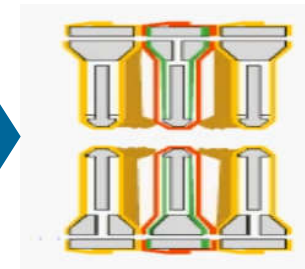
- The filter press consists of a series of membrane & chamber plates.
- Hydraulic force will hold these plates together .
- Slurry is pumped into the filter press under pressure after flushing process.



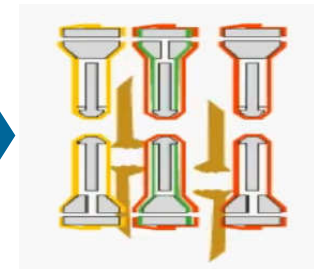
- Filtrate passes through the filter cloth leaving the solids.
- Over a period of time, solids will build up in the membrane chamber forming “filter cakes”.
- Filtration will stop when feeding pressure is achieved.
- Filter cake will contain both liquid and solids.



- After that, pre-squeezing & squeezing process will start.
- Then membrane plates will be inflated by water from squeezing tank to exert a mechanical force on the filter cakes retained inside the plates.
- The squeezing pressure vary from 6 Bar to 15 Bar.



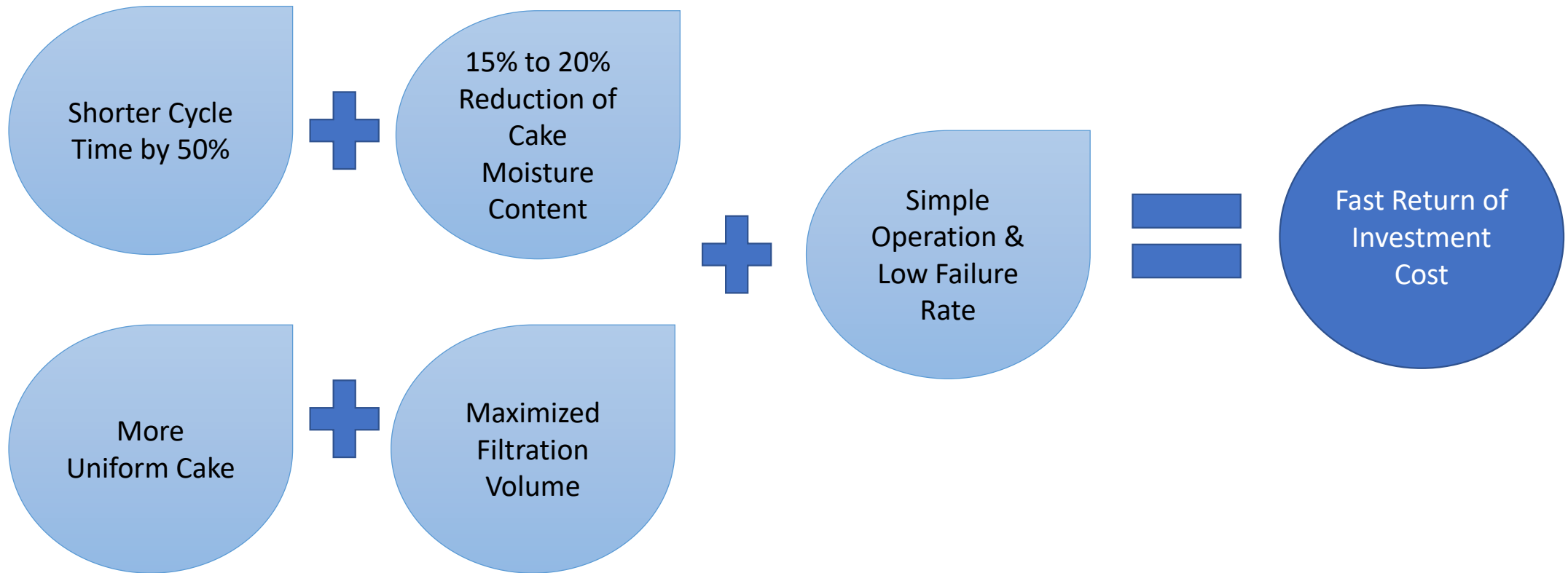
- Then compressed air will be injected in the opposite end that the filter press is filled in to allow residual slurry to be purged out during core blow step.
- During cake drying step, compressed air is introduced to blow away the residual liquid left in the cake surface.



- After pressure release, drip pan and filter press fully opened.
- filter cakes are ready to be discharged by using motorized operated plate shifter.

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# BENEFIT OF PLUS MEMBRANE CHAMBER FILTER PRESS



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## COMPARISON OF ACTUAL MOISTURE CONTENT RESULTS

TYPE & MODEL	Plate Size	Feed Pressure	Squeezing Pressure	Moisture
<b>CHAMBER FILTER PRESS C1006-CS-3832-A-PS-DT</b>	1000mm X 1000mm	6 Bar	N/A	<b>65% to 80%</b>
<b>MEMBRANE CHAMBER FILTER PRESS MC1015-CS-5340-A-EPS-EDT</b>	1000mm X 1000mm	6 Bar	15 Bar	<b>40% to 55%</b>

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# INNOVATIONS OF PLUS POINT TECHNOLOGY



MOTORIZED DRIP  
TRAY  
→ More Reliable



MOTORIZED PLATE SHIFTER FOR CAKE  
DISCHARGING  
→ Protects Plate  
Handles



INVERTER CONTROL FOR T-PORT VALVE  
MEMBRANE FOR SQUEEZING PROCESS  
→ Allow Pressure Regulation for More  
Uniform Cake



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# REFERENCE FOR MEMBRANE CHAMBER FILTER PRESS

## Semiconductor Waste Water Treatment Plant



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# REFERENCE FOR MEMBRANE CHAMBER FILTER PRESS

## Rubber Plant Waste Water Treatment



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# REFERENCE FOR MEMBRANE CHAMBER FILTER PRESS

Palm Oil Mill Effluent



Electronic Waste Water Treatment Plant



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# REFERENCE FOR MEMBRANE CHAMBER FILTER PRESS

The Process and Production of Clay



Heavy Metal Slurry Waste Water Treatment Plant



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# REFERENCE FOR CHEMICAL FILTRATION USING SPECIAL PLATES

## Chemical Waste Water Treatment Plant



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**THANK YOU**

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