

# modiFALT

Polymer Modified Bitumen (PMB) Plant



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MARINI modiFALT Polymer Modified Bitumen (PMB) Plant is the ideal solution for all road projects with its high mill performance compact design, ease of use and economic operation features. With its very high production capacity, modiFALT can meet the needs of all road, highway, railway, airport projects and special applications which requires modified bitumen usage.

Type	Capacity	Heating	Transportation	Polymer Dosing System	Control System
modiFALT15	15 t/h	Thermal Oil	1x 40' OT or 1x TIR	1x manual with ready weighed bags and/or 1x automatic with BigBag	PLC – computer control full automatic & semi automatic conventional
modiFALT30	30 t/h	Thermal Oil	2x40' OT or 2x TIR	2x automatic with BigBag	PLC – computer control full automatic
modiFALT20	20 t/h	Thermal Oil	1x 40' FL or 1xTIR	1x manual with ready weighed bags and/or 1x automatic with BigBag	PLC – computer control full automatic & semi automatic conventional
modiFALT40	40 t/h	Thermal Oil	2x 40' FL or 2xTIR	2x automatic with BigBag	PLC – computer control full automatic

### Easy Transportation of modiFALT20



modiFALT20 PMB Plant can be transported easily by truck and also by 40' FL all around the world.

Width x Length x Height: 2400x11500x2670mm

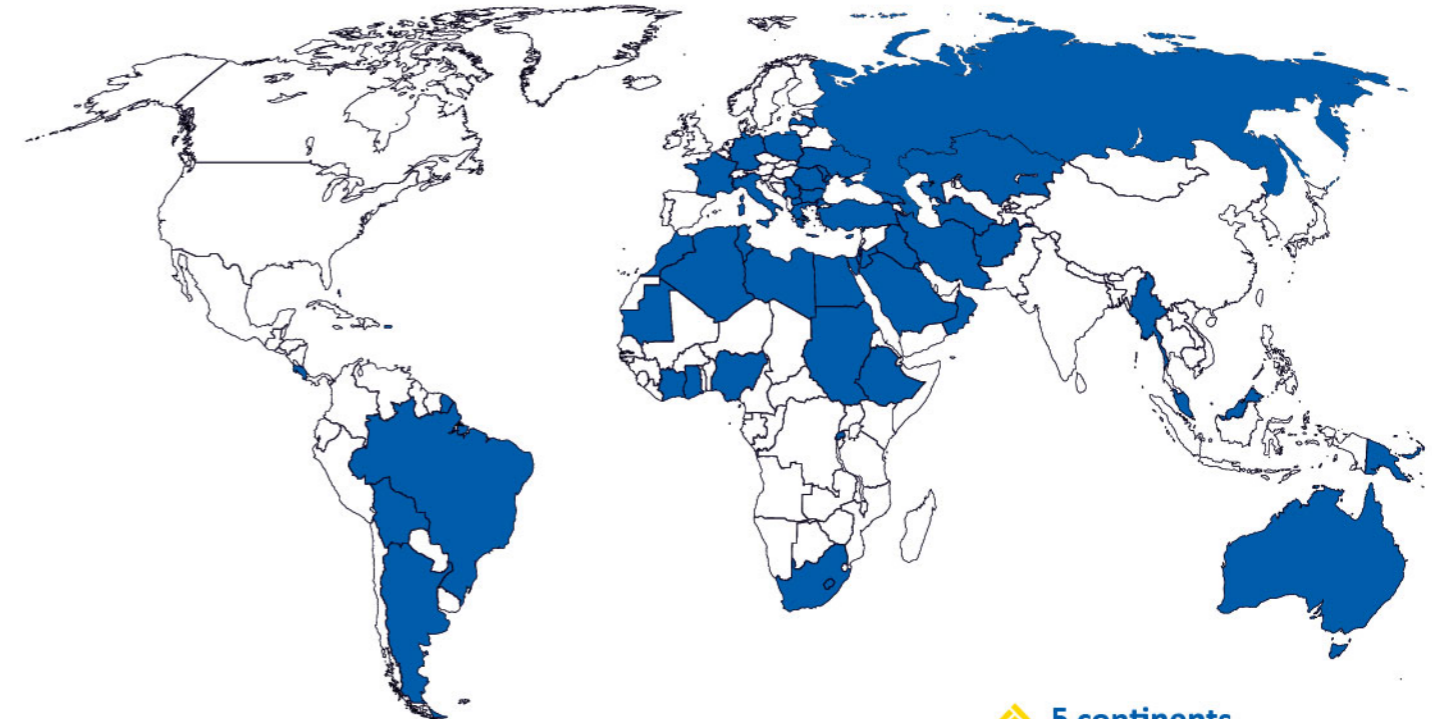
### Easy Transportation of modiFALT15



modiFALT15 PMB plant's eco-design allows it to be transported by 40' OT container. By the means of this feature, it is the best solution and also the most economic method for overseas trades.

Width x Length x Height: 2160x11500x2250mm

- ◆ modiFALT PMB plants are specially designed for modification of bitumen with granule polymer additives (SBS) and can meet all high capacity requirements of road construction and airport projects. Additionally, other types of bitumen modifiers such as EVA, crumb rubber etc. can be easily used for bitumen modification with modiFALT.
- ◆ modiFALT's specially designed 160kW high shear mill is developed and produced by MARINI MAKİNA for the best working performance with granule polymer types (e.g. SBS) and it ensures polymer modification with less than <0,3mm grain size in one pass.
- ◆ Long-term and problem-free working time thanks to the mill seal cooling system.
- ◆ Two process tanks both equipped with four loadcells ensures precise weighing for flexible batching process from 500 kg to 5ton at desired number of pass.
- ◆ Each process tank equipped with twin agitators of 7,5kW each, which provide strong mixing performance.
- ◆ Design of tanks prevents agglomeration of the polymer particles, and also sticking to tank walls through thermal oil heating coils that surround the process tanks from sides and bottom.
- ◆ Fully automatic control system with PLC+SCADA and computer controlled system.
- ◆ Trouble-free international transportation and assembly thanks to its standard dimensions.
- ◆ Optional; automatic polymer dosing system.
- ◆ Optional; manual or automatic dosing system for solid (i.e Sulfur powder) and liquid (e.g. PPA) additives.



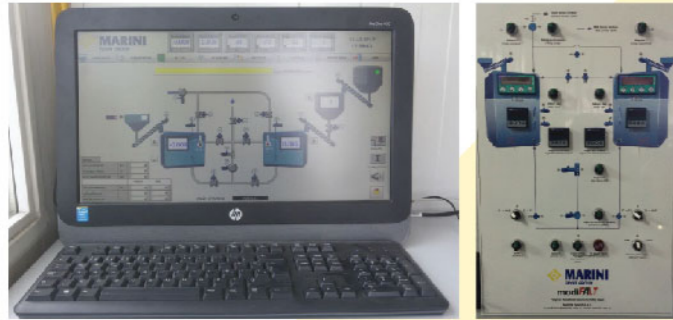
- ◆ 5 continents
- ◆ 58 countries
- ◆ More than 1500 products

## Control Cabin

User-friendly control cabin allows operator to work under comfortable conditions and protects the electric box & control system from dust, rain and humidity etc.

Fully flexible, double control systems;

- ◆ Semi-automatic
- ◆ Full automatic control with PLC + computer control system (w/ SCADA) to suit varying operating conditions.



modiFALT Animation QR

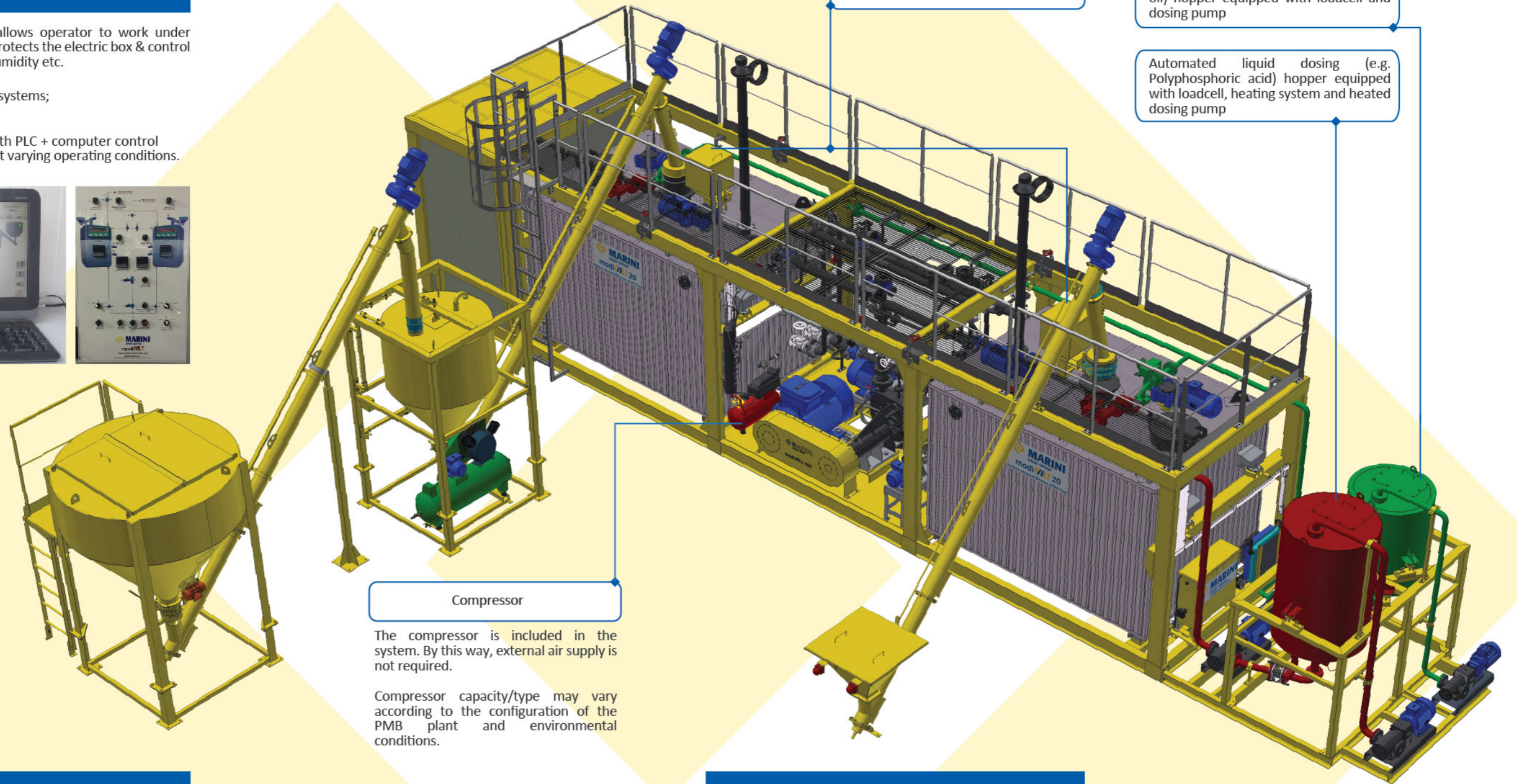
## modiMILL (High Shear Mill)

160kW high shear mill with a high capacity which is designed and manufactured by MARINI TURKEY.

Thanks to its unique design, developed by MARINI TURKEY engineers, which ensures 7 cutting stages at once; modiMILL high shear mill allows proper polymer modification of bitumen even in one pass.

Bitumen feeding pump with a capacity of 50m<sup>3</sup>/h, which transfers bitumen to the high shear mill prevents performance and capacity losses, so modiMILL is just focused on cutting process.

Easy adjustment of milling surface gap, allows the usage of different bitumen modifiers.



Solid dosing system with manual gates

Automated liquid dosing (e.g. Aromatic oil) hopper equipped with loadcell and dosing pump

Automated liquid dosing (e.g. Polyphosphoric acid) hopper equipped with loadcell, heating system and heated dosing pump

Compressor

The compressor is included in the system. By this way, external air supply is not required.

Compressor capacity/type may vary according to the configuration of the PMB plant and environmental conditions.

## Liquid and Solid Dosing System (OPTIONAL)

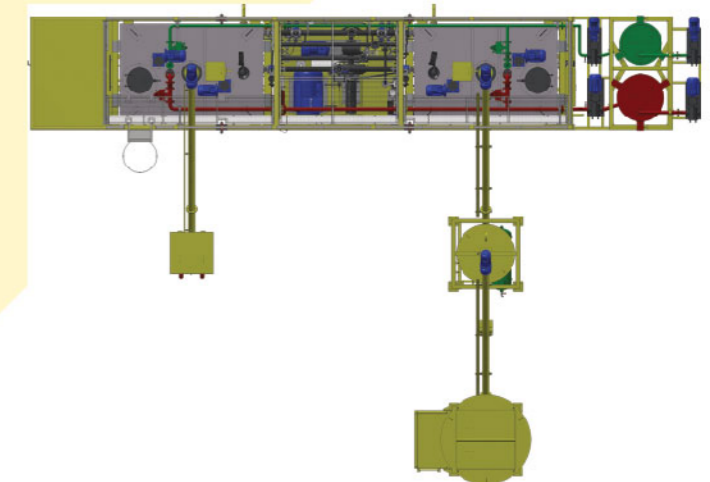
As an option, modiFALT Polymer Modified Bitumen Plant can be equipped with liquid and / or solid additive dosing systems.

Solid additives like sulphur flakes can be added through systems with manual gates, which are placed at the top of bitumen weighing and mixing tanks.

There are different systems for liquid additive dosing with heating, loadcell, flowmeter, etc. options according to additive specifications.

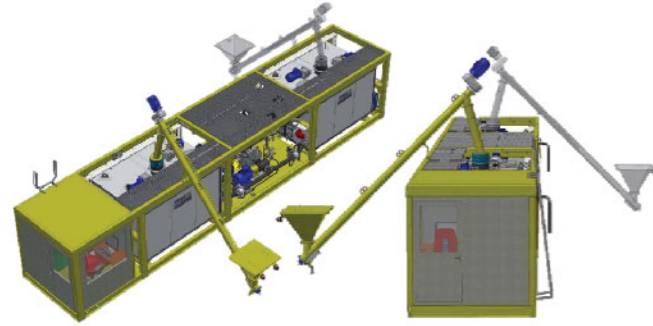
They are separately connected to both weighing and mixing tanks via pipelines. The pipelines might be equipped with heating systems according to requirements.

Dosing process is automatized and controlled by SCADA system. Liquid additive hoppers are equipped with loading and dosing pumps and also loadcells for precise weighing and dosing.



## Manual Polymer Dosing System with Universal Design

Universal design; electrical and mechanical systems are designed to place screw conveyor(s) on both sides of the both weighing & mixing tanks, so modiFALT can adapt to any worksite layout.



## Weighing & Mixing Tanks

Two weighing-mixing tanks are equipped with twin agitators (2x7.5kW) that ensure proper polymer distribution and powerful mixing inside the batch tank.

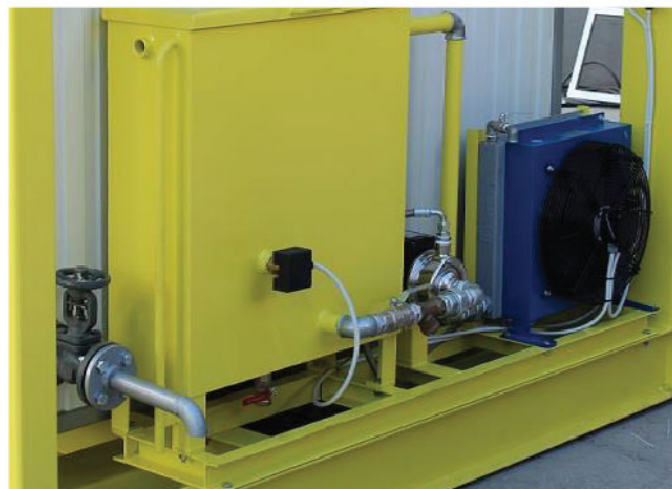
Agitators, as well as the seamless smooth internal lining of the tanks, prevent sticking of material on tank walls and agglomeration of bitumen.

They are also equipped with 4x loadcells with digital weight indicator for precise weighing of the bitumen.

All surfaces of the batch tanks, even the bottom, include heating in the outer layer.

The bitumen/PMB inside the batch tank is sucked from the bottom surface to prevent any residual material.

## Mill Cooling System



Mill cooling system makes mill's soft packing lifetime longer and helps to work in higher performance.

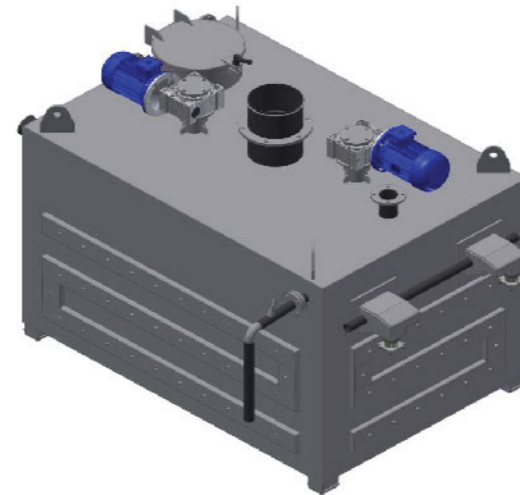
## Automatic Polymer Dosing System (OPTIONAL)

Polymer stock hopper with wide gate allows easy BigBag loading; equipped with vibrator motor and low level alarm sensor.



Polymer weighing hopper; equipped with loadcell, pneumatic vibrator motor, pn. actuated discharge gate.

Screw conveyor for each polymer weighing & feeding system.



## Weighing & Mixing Tanks Details



4x loadcells per tank provide accurate process weighing and flexible batching possibilities.



Analogue and digital thermostatic controllers for each tank controls operation temperature.



**NIGERIA - modiFALT20 PMB Plant up to 20 t/h**

modiFALT has proven itself as a reliable working partner even in the harshest environments without compromising its production quality and capacity, where machines are subjected to extreme environmental conditions.



**UKRAINE - modiFALT20 PMB Plant up to 20 t/h**

Ukraine is where MARINI TURKEY maintains its market leader role in respect to both asphalt plants and bitumen engineering machinery. In recent years we have accomplished many projects in different parts of the country and the demand for our products is increasing rapidly.



**TURKEY - modiFALT 40 PMB Plant up to 40 t/h**

Alongside its uninterrupted 7/24 production capability, modiFALT plants are supplying polymer modified bitumen to both infrastructure developers and construction companies in order to meet their requirements such as polymer bitumen membranes, etc.



**ARGENTINA - modiFALT30 PMB Plant up to 30 t/h**

There are several worksites within Argentina that rely on modiFALT's superior performance and robustness which will eventually lead us to be the market leader. The reasons behind the success of modiFALT in Argentinian market is not limited to plant's transportation advantages due to its compact dimensions, but also its high quality outcome and reliable operation.



**KUWAIT - modiFALT15 PMB plant up to 15 t/h**

It is a known fact that Gulf countries are constantly investing in infrastructure development and Kuwait is one of the leading countries in that respect where high demands on quality PMB production exists. Thus, modiFALT's quality and many other advantages make it a must-have product for the Kuwaiti customers.



**BOLIVIA - modiFALT15 PMB Plant up to 15 t/h**

Despite its far location, we have managed to successfully install and launch a PMB & emulsion production facility in order to satisfy the needs of Bolivian road building sector. This project is still the biggest machinery export operation between Turkey & Bolivia consists of 75 containers (40' OT).