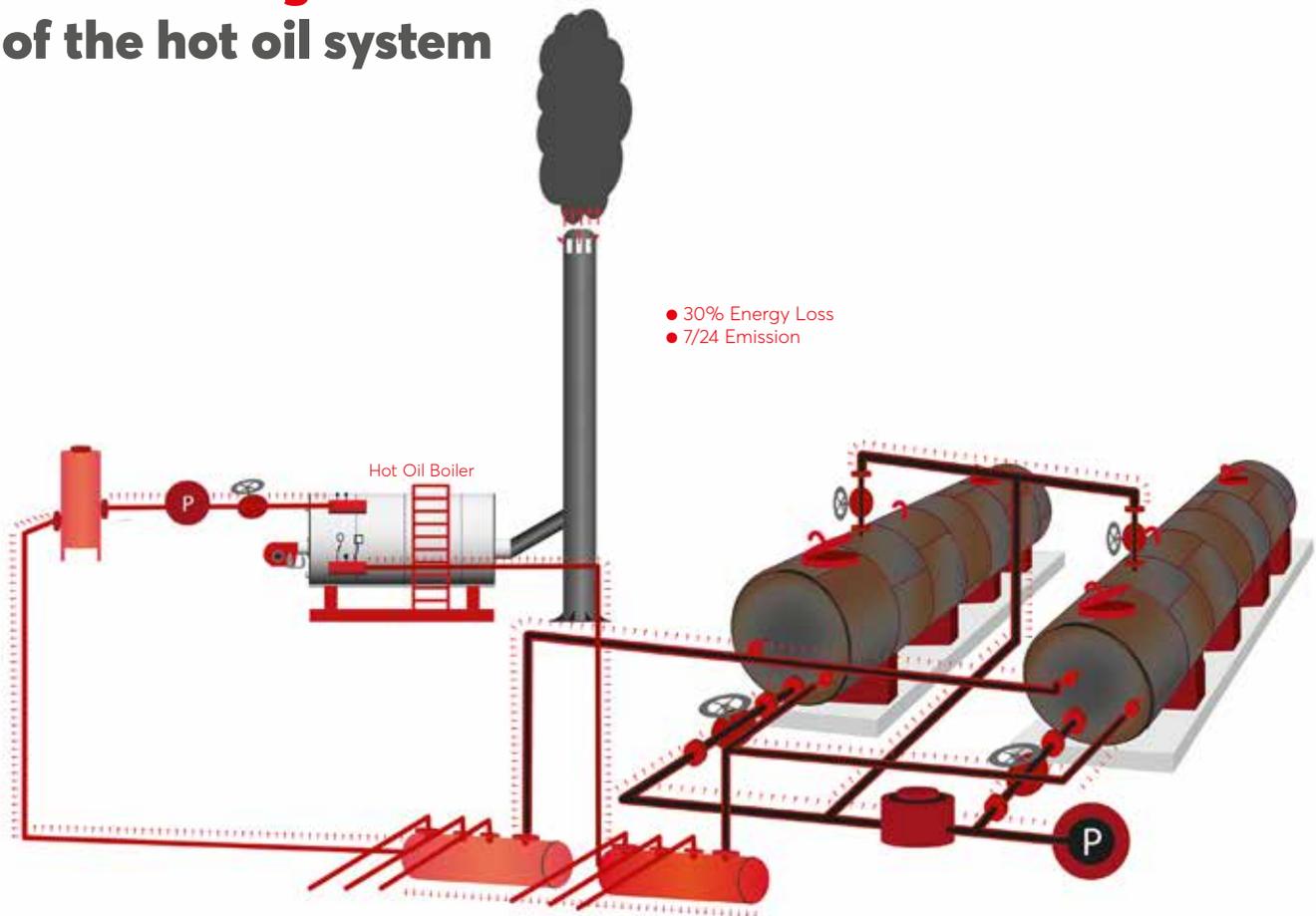


# Bitumen Tanks

[e-mak.com](http://e-mak.com)



## Disadvantages of the hot oil system



### Energy loss in conventional, horizontal and cylindrical bitumen tanks

- While hot oil boiler is running, burning fossil fuels will lead to high CO<sub>2</sub> emission and continuous energy loss.
- As tanks are heated using hot oil, the thermal-transfer oil will lose at least 20% of its heat in boiler, pipes, and valves and through the entire network.
- Failures in the hot oil boiler and its burner will lead to decrease in bitumen temperature.
- Leakages in the hot oil network will cause environment pollution.
- From the labor and operating safety point it has dangerous situation like fires.
- Loss in heating efficiency because of carbon residue on heating pipes inside the bitumen tanks.
- Both fuel (Natural gas, Diesel, Fuel oil etc.) and electricity are used to heat up the oil in the boiler.

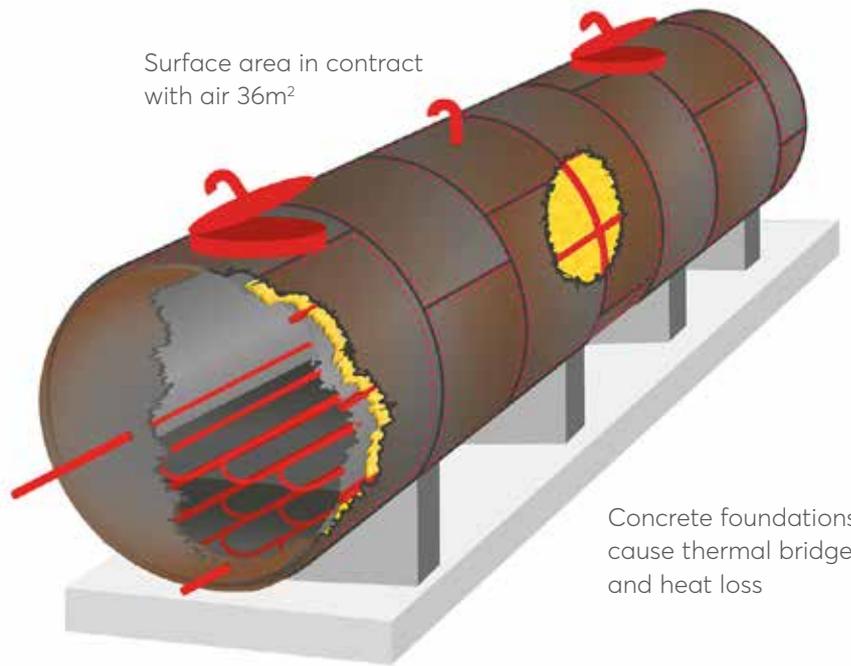


### Oxidation and heat loss

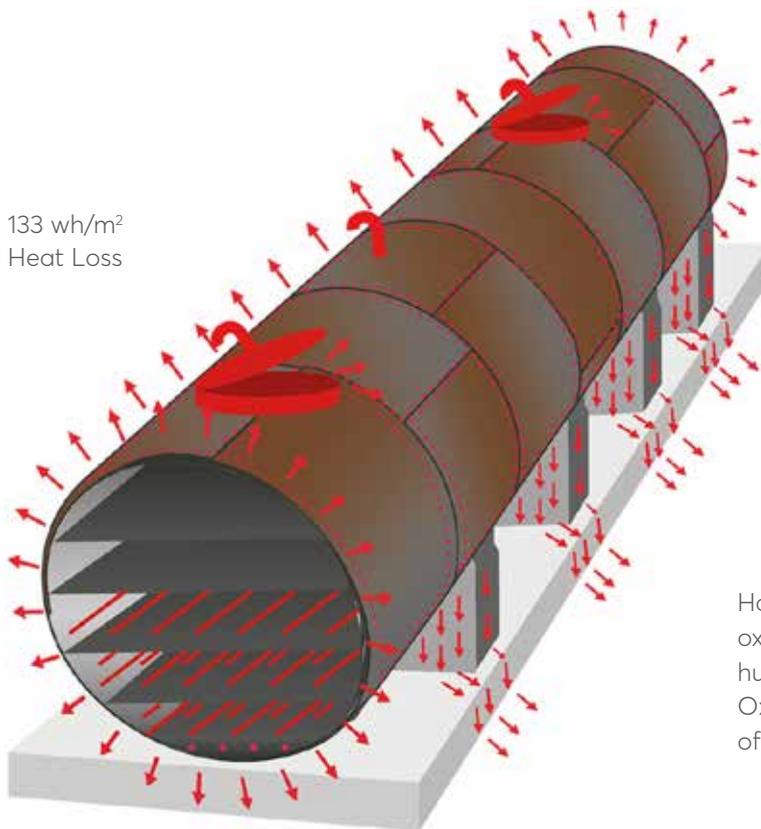
These tanks are generally insulated with 50-100mm glass wool. At least 20% of the surface area is totally uninsulated.

Concrete foundations used as tank legs cause thermal bridge

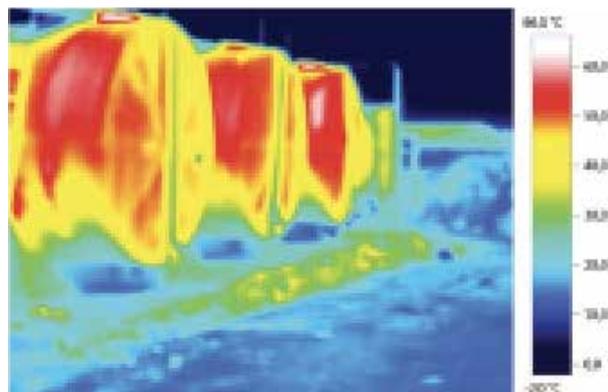
After bitumen level drops down a certain level, serpentine will be come out and causes heat loss to increase



Concrete foundations cause thermal bridge and heat loss



Horizontal tanks causes oxidation of bitumen due to huge surface contact with air. Oxidation damages the quality of bitumen and air quality.



# ADVANTAGES

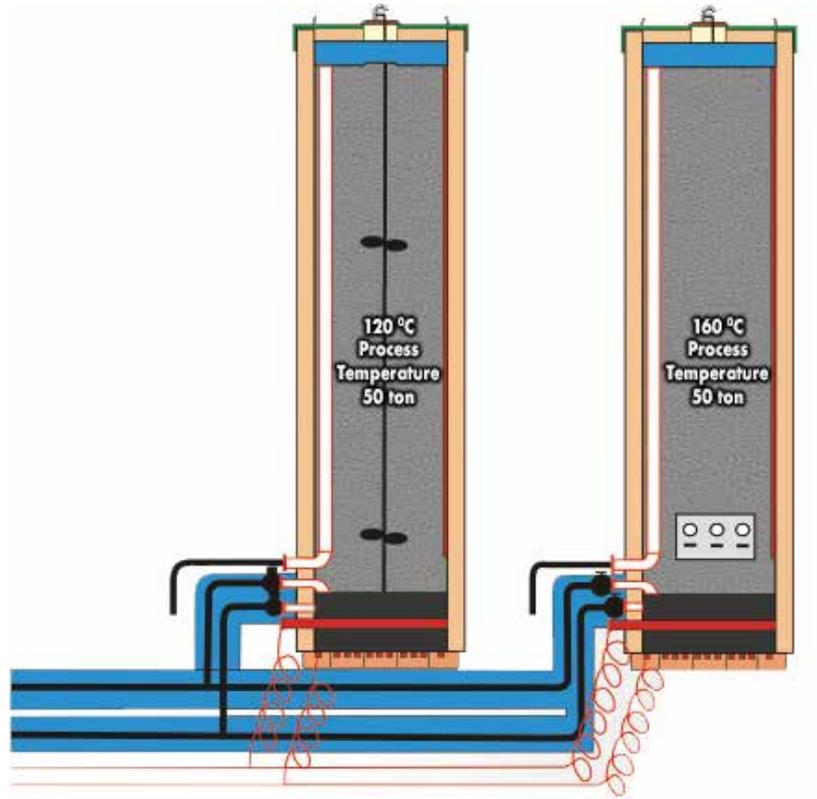
## E-MAK Bitumen Tanks

- Insulated with 200-250 mm rock woll, thus heat losses are minimized
- Zero CO<sub>2</sub> emissions since hot oil burner is not needed
- No heat losses due to heat transfer process as heat is generated directly in the tank

Can be heated during cheaper electricity rates

Heat loss 20wh/m<sup>2</sup>

For modified bitumen option, tanks with agitation shaft & mixer are available.



### AUTOMATION

Bitumen level and temperature monitored from the control cabin. In case of temperature drops, electrical heating turns on automatically.





## Horizontal or vertical type in desired capacities

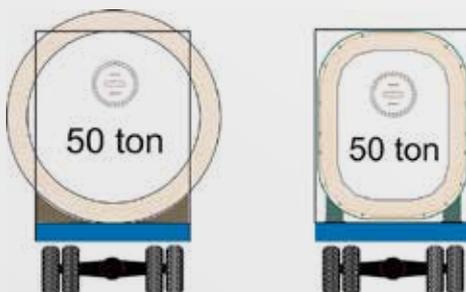


- No oil leakages as hot oil is not used anymore
- Using vertical tanks provide minimum surface contact with air to minimize oxidation
- Safe in terms of occupational health and safety
- 3 tanks can be installed in an area where 1 horizontal tank space occupies



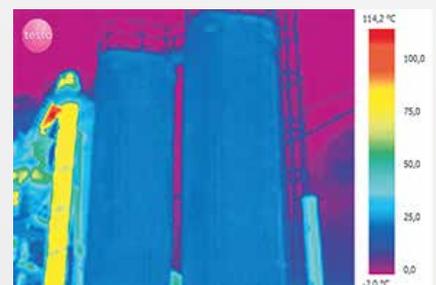
### TRANSPORTATION

E-MAK vertical prismatic type bitumen tanks with dense insulation have high stocking capacity and enables easy international transportation.



### INSULATION

Vertical type tanks upper, lower and side surfaces are insulated with up-to 25 cm rock wool. Thus, heat losses prevented.



# E-MAK BiSAS Bitumen Tank Sets

E-MAK SAS Bitumen tanks can be used as both service and stocking purposes simultaneously

- There is no more need to buy any additional service tanks other than stock tanks
- Several bitumen types can be used in the same set
- Unlike conventional tanks, there is no more need to heat the stocking tanks all the way to be able to transfer bitumen to service tank

No more stock tanks are necessary for the projects within 40 km radius

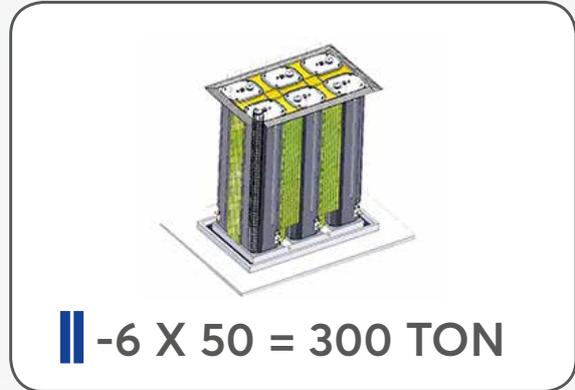
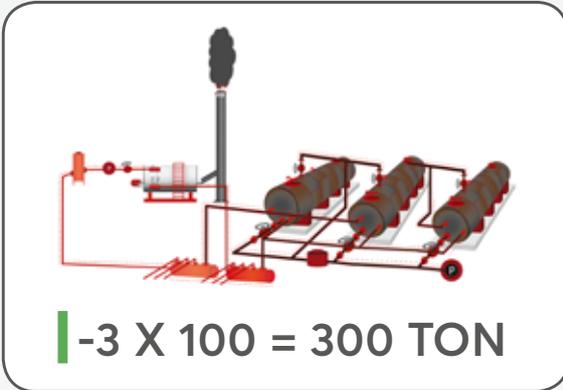


E-MAK BiSAS Bitumen tank Sets can be designed in different quantities depending on the project.

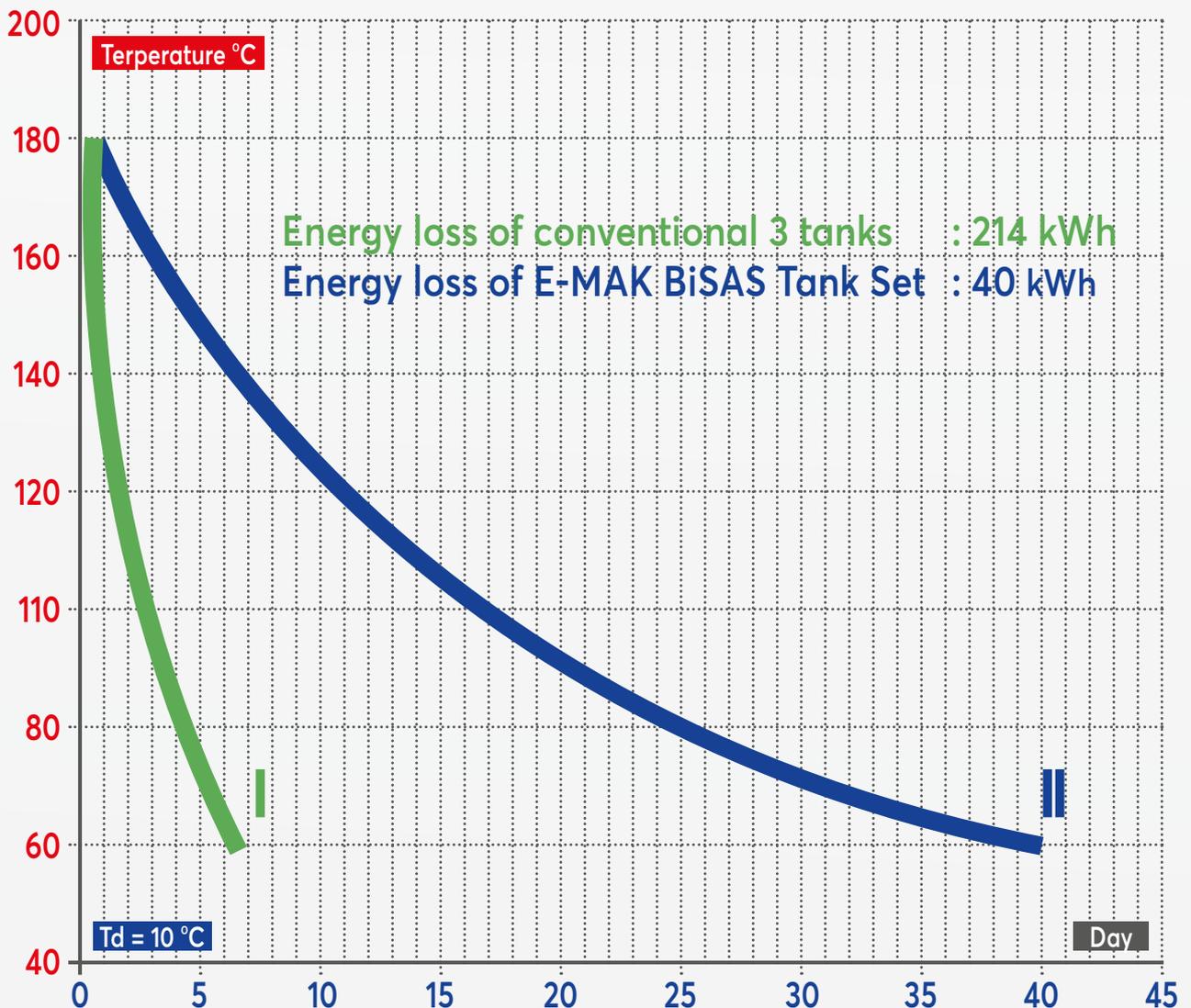
- Surfaces subjected to wind are covered with additional insulation (sidewalls and roof) to minimize surface area and heat losses
- Each tank can be easily transported individually
- Easy to dismantle and re-mount to different locations for multiple projects
- Each tank can be operated individually
- Each tank can maintain different pre-set temperatures separately
- Mixing unit can be added for modified bitumen

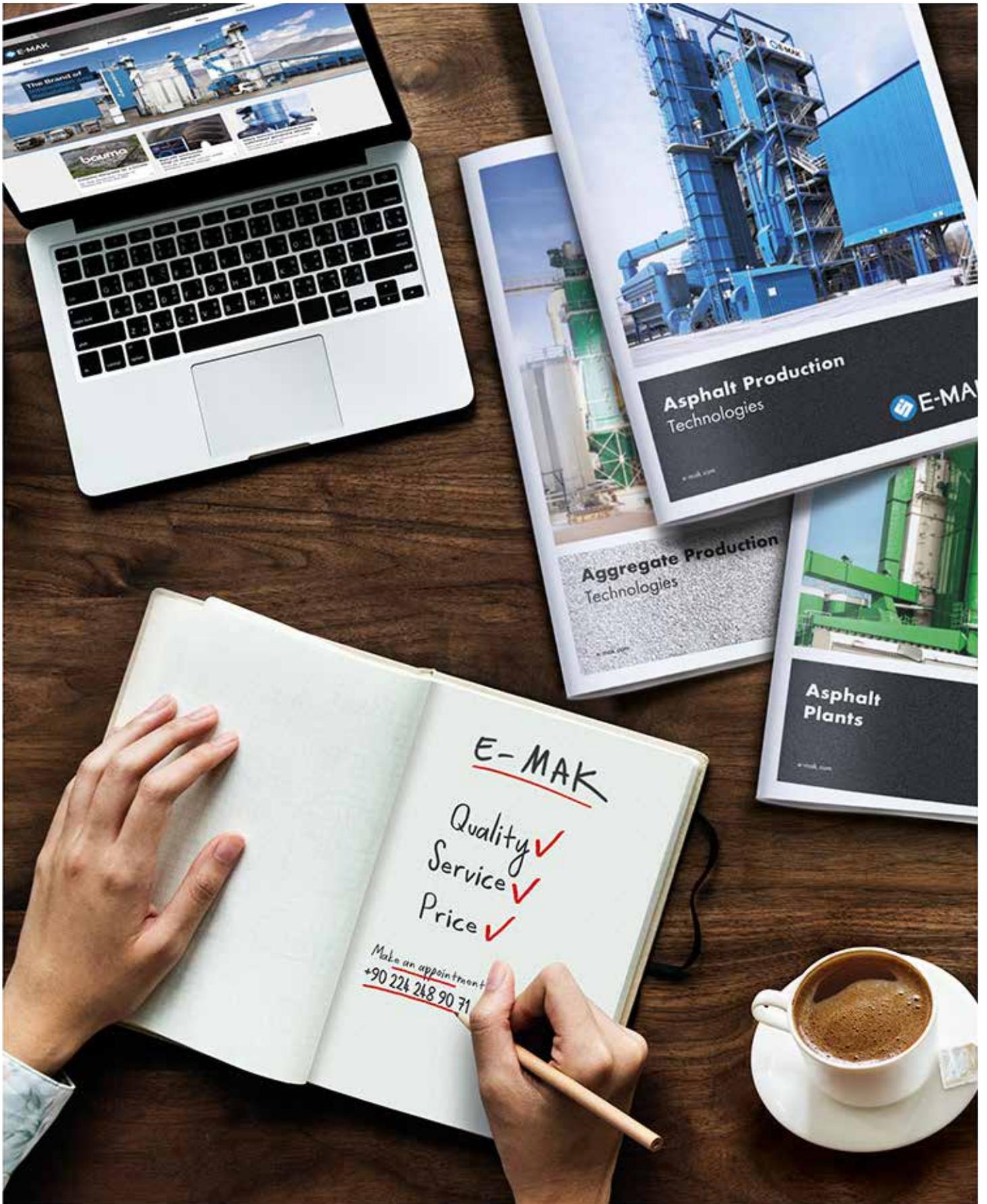


**BITUMEN SERVICE & STOCK TANKS**



**COMPARISON OF ENERGY CONSUMPTION**





**E-MAK**  
MACHINE CONSTRUCTION INDUSTRY & TRADING CORP.

e-mak.com | info@e-mak.com | +90 224 248 90 71

E-MAK reserves right to change or modify technical data and specifications at any time without notice.

