

SUPERIOR HEATING SOLUTIONS for the concrete industry



TOTAL HEATING SYSTEM SOLUTION

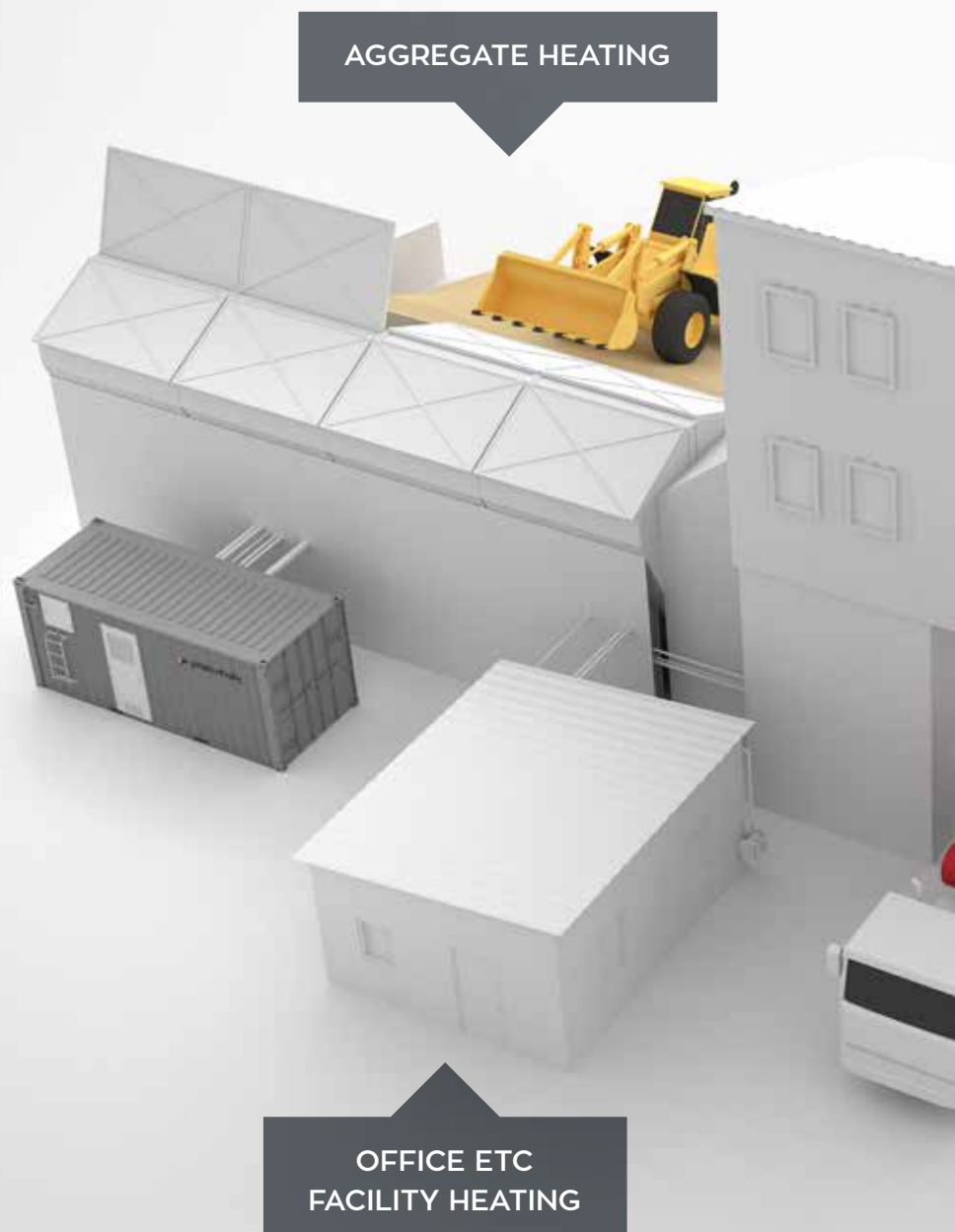
Increased production. High quality concrete.
Significant savings... at all times,
under all conditions - however cold...

The TURBOMATIC™ heating system is specifically developed to solve all heating needs in batching plants in the most efficient manner and more importantly to maintain the optimum concrete quality – both temperature and water-to-cement ratio - at all times. With a single unit.

With the TURBOMATIC heating system concrete can be produced at the same capacity at all ambient temperature conditions ie. there is no reduction in production even during the coldest of winters. In addition to being fast, reliable and efficient - as well as – environmentally friendly – the TURBOMATIC heating system provides superior energy economics and thus significant savings.

The TURBOMATIC heating unit can also be utilized as the heat source for curing.

Please refer to Polarmatic Oy's CUREMATIC™ curing solutions.



AGGREGATE HEATING

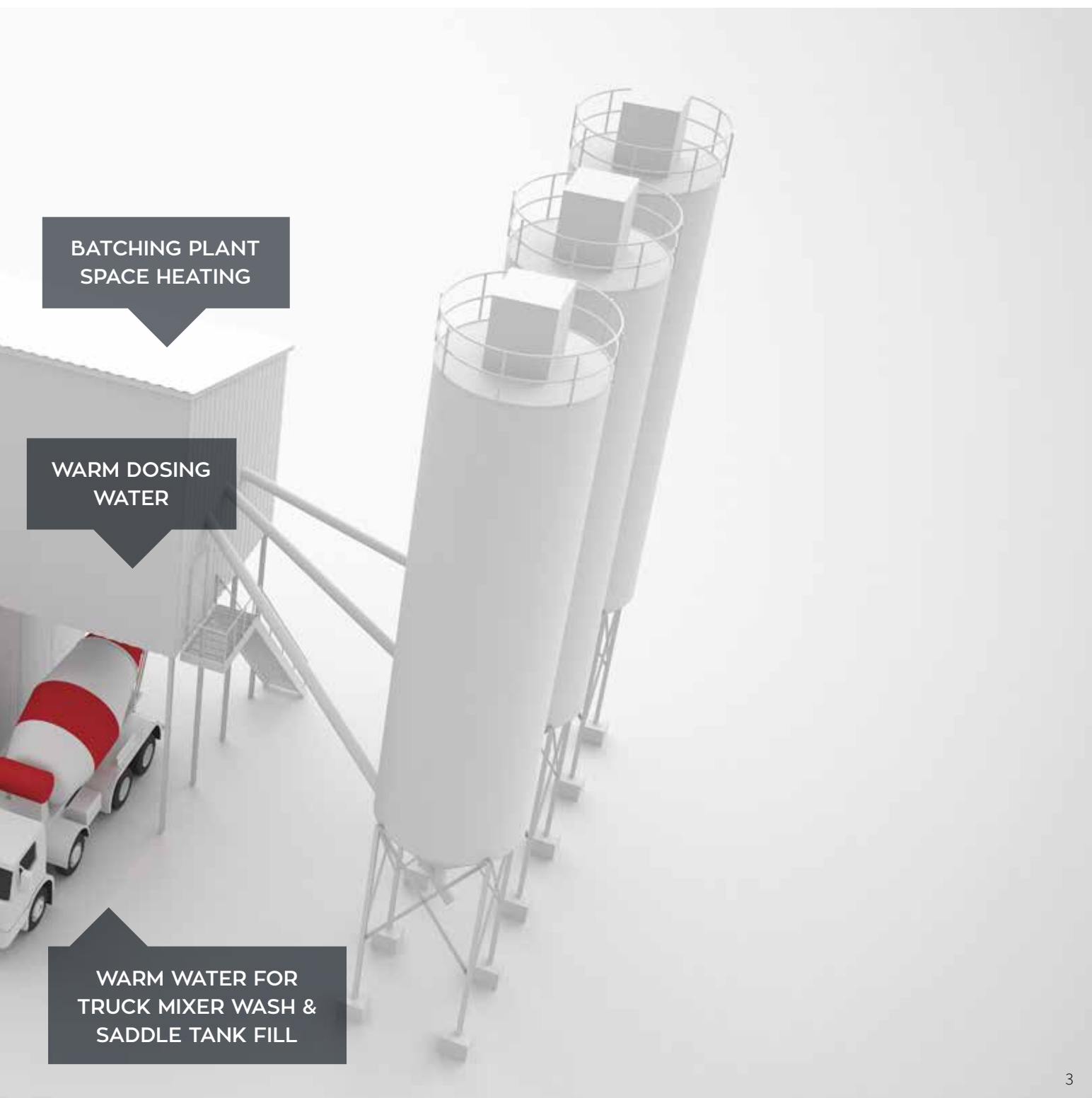
OFFICE ETC
FACILITY HEATING

The main functions of the TURBOMATIC are:

- » quick melting of frozen aggregates
- » pre-heating and heating of aggregates, and/or
- » generation of warm dosing water

The TURBOMATIC is also capable of handling – a single unit - all other batching plant heating and warm wash and utility water requirements, such as:

- » heating of batching plant production facilities
- » heating of offices and other facilities
- » generation of warm wash water
- » generation of saddle tank fill water (for truck mixers)
- » production of warm utility water





OPTIMUM SOLUTION FOR SUPERIOR PERFORMANCE

The TURBOMATIC heating system is available in different models and configurations meeting different customer requirements and climate conditions in an optimum and most effective manner. A wide capacity range, fuel options and various layouts ensure that the best possible solution can always be found for each and every customer.

MAIN FUNCTIONS AND HEATING OPTIONS

TURBOMATIC Thermal Energy Unit

Total heating solution for batching plants: heating of aggregates and generation of warm dosing water; also capable of handling all other batching plant heating and warm wash water needs...

- » compactTURBOMATIC for moderate climates and average heating requirements
- » standardTURBOMATIC for moderate to severe climate conditions and average to high heating requirements
- » maxTURBOMATIC for severe to extreme climate conditions and high, continuous 24/7 heating requirements

TURBOMATIC TURBOsteam generator

High-efficiency and most effective solution for aggregate heating in batching plants

TURBOMATIC Warm Water Unit

Optimum solution for generation and storage of warm dosing water in batching plants; also capable of handling all other batching plant heating and warm wash water needs.

CAPACITY

The TURBOMATIC is available in a wide capacity range, from 300 kW to 2500 kW (depending on the model).

FUEL

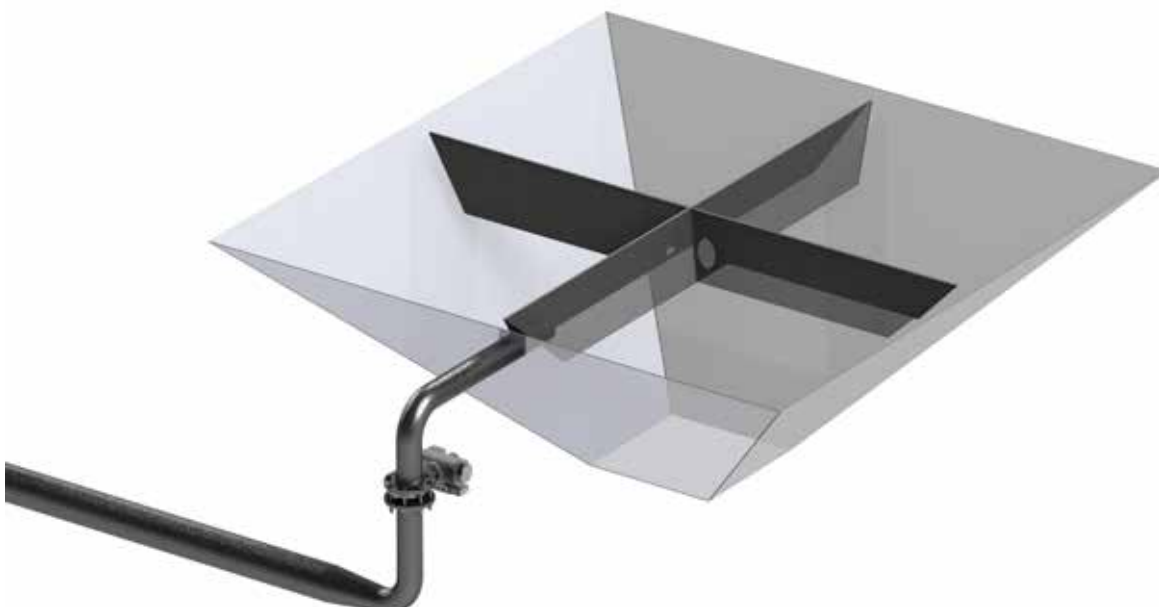
Fuel options are natural gas, propane or equal, light fuel oil and bio-oil. When fuel flexibility is needed the TURBOMATIC can also be equipped with a combi-burner capable of firing both gaseous (natural gas, propane etc) and liquid fuels (fuel oil, biodiesel).

LAYOUT

The TURBOMATIC is built in a standard 20' or 40' container which is thermally insulated for outdoor installation. For indoor installations the TURBOMATIC is built on a steel frame ('rack').

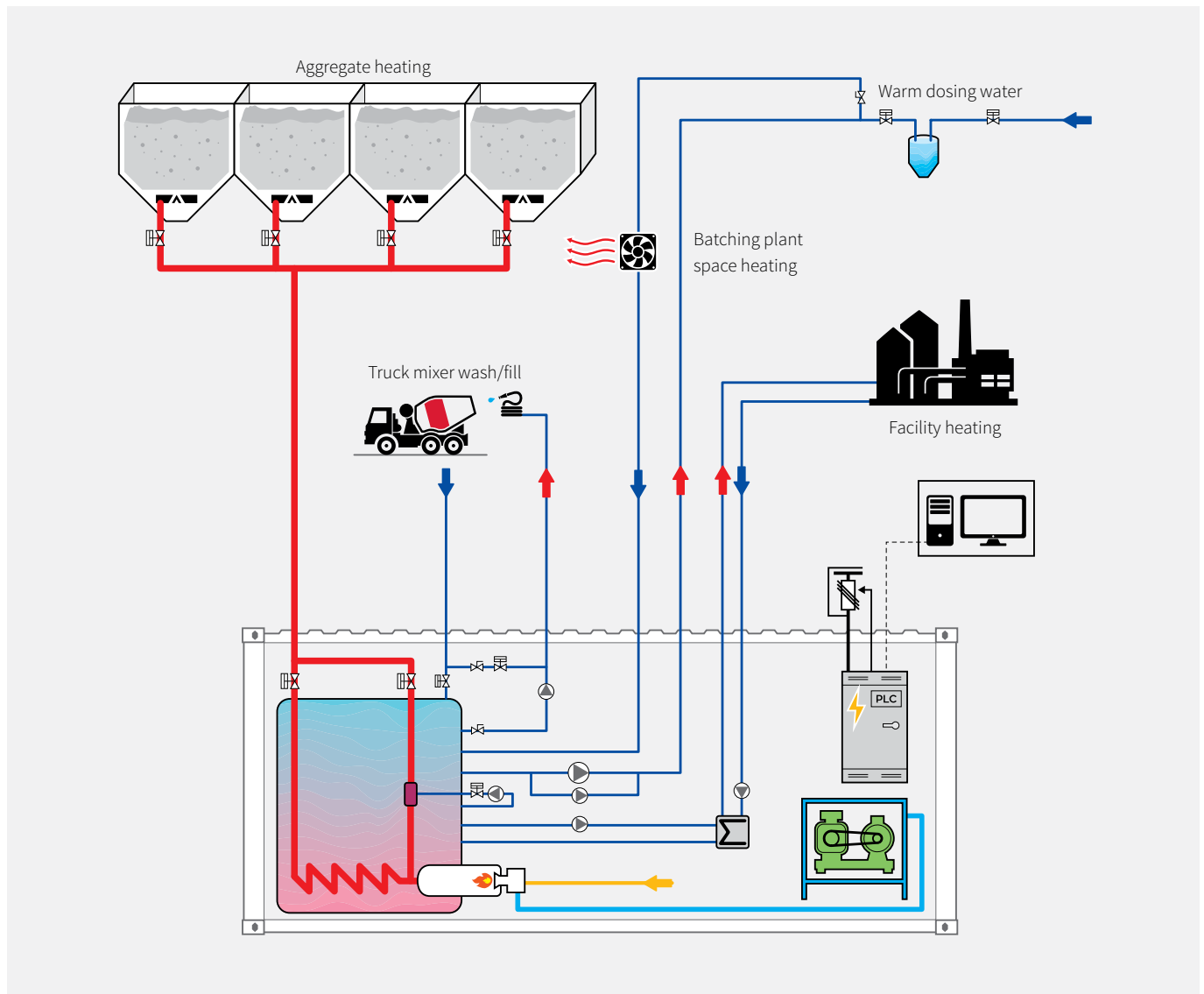
CONTROL

The TURBOMATIC is fully automatic: the unit is operated by the batching plant operator through the PC user interface of the TURBOMATIC control system.



standardTURBOMATIC (“STD”) thermal energy unit

Proven solution for production of warm concrete with optimum water-to-cement-ratio in moderate to severe climate conditions and handling of all other batching plant heating and warm wash water needs.



APPLICATION

Suitable for most heating requirements in moderate to severe climate conditions and/or for applications with moderate to high heat power needs.

MAIN FUNCTIONS

- » Aggregate heating with TURBOgas or -steam
- » Generation of warm dosing water

HEATING OPTIONS

- » Heating of batching plant production facilities
- » Generation of warm wash water
- » Supply of warm water for filling of truck mixer saddle tank
- » Heating of other associated facilities e.g. offices, laboratories etc.
- » Production of warm utility water

PME-STD 750	PME-STD 1000	PME-STD 1250	PME-STD 1500	PME-STD 2000	PME-STD 2500
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CAPACITY

750 kW	1000 kW	1250 kW	1500 kW	2000 kW	2500 kW
aggregates 75...525 kW	aggregates 100...700 kW	aggregates 125...875 kW	aggregates 150...1050 kW	aggregates 200...1400 kW	aggregates 250...1750 kW
water 675...225 kW	water 900...300 kW	water 1125...375 kW	water 1350...450 kW	water 1800...600 kW	water 2250...750 kW

FUEL

Light fuel oil, biodiesel (max rated oil flow)					
75 l/h	100 l/h	125 l/h	150 l/h	200 l/h	250 l/h
Natural gas (max rated natural gas flow)					
75 m³n/h	100 m³n/h	125 m³n/h	150 m³n/h	200 m³n/h	250 m³n/h
natural gas pressure: 2-4 bar (g); min. 0,8 bar (g)					
Options: <ul style="list-style-type: none"> » Fully integrated oil tank located inside TURBOcontainer (oil tank volume 4 000 l/20' container or 10 000 l/40' container); separated with fire wall and equipped with all necessary safety etc accessories » Combi-burner for dual fuel operation: light fuel oil or natural gas » Gas-burner for propane or other gaseous fuels 					

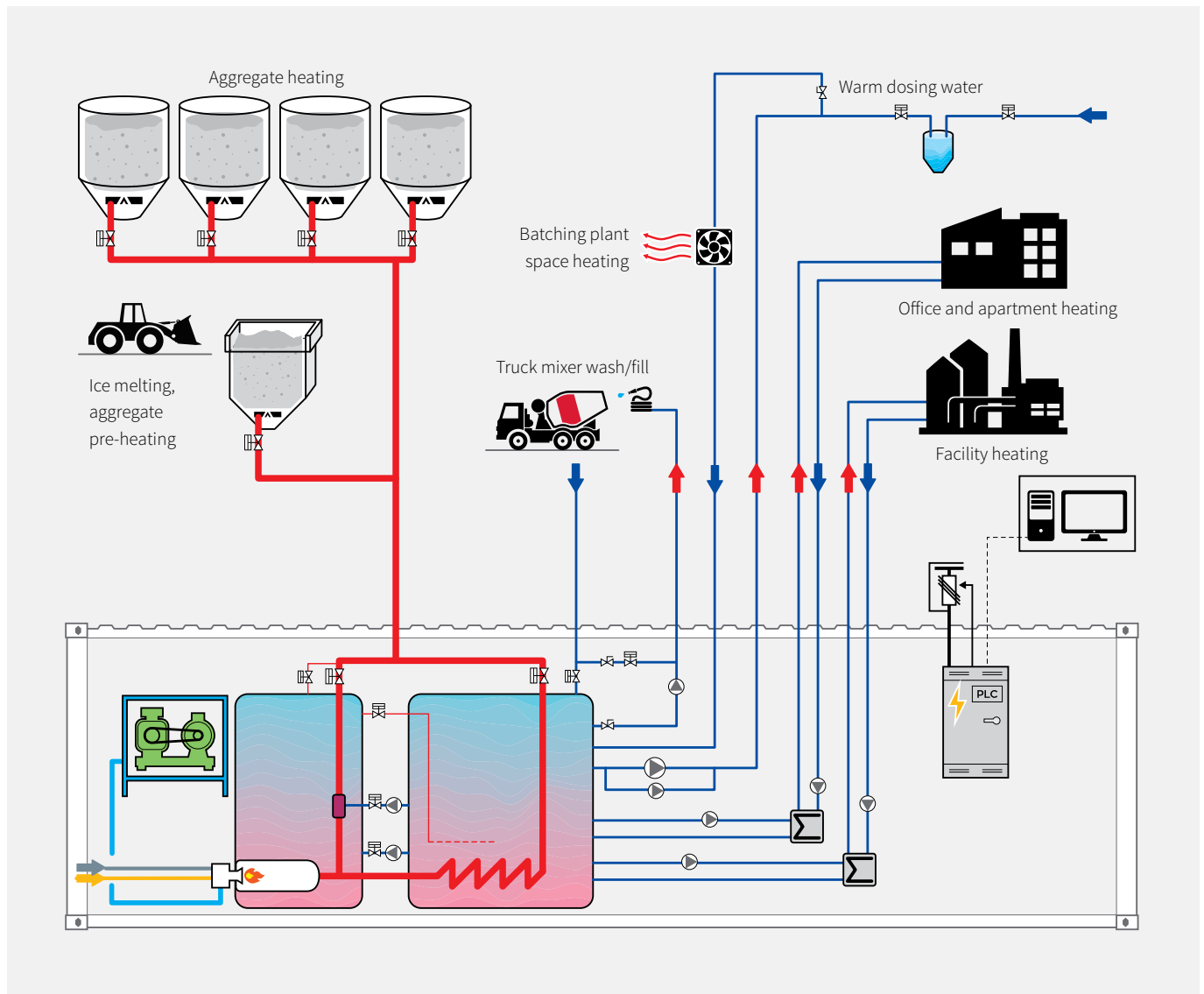
STRUCTURE / LAYOUT

TURBOcontainer <ul style="list-style-type: none"> » thermally insulated, for outdoor usage » side door for easy access » standard 20' (l 6050 x w 2438 x h 2592) or 40' (l 12192 x w 2438 x h 2592) container; also special containers as per customer requirements. » painted as per customer requirements (acc. to RAL-specification)
TURBORack <ul style="list-style-type: none"> » for indoor installation. » rack dimensions (l 4170-5400 x w 2120 x h 2400); also special rack dimensions as per customer requirements



maxTURBOMATIC (“MAX”) thermal energy unit

Total solution for production of warm concrete with optimum water-to-cement-ratio in severe to extreme climate conditions and handling of all other batching plant heating and warm wash water needs.



APPLICATION

Suitable for extreme climate conditions and when high power, continuous 24/7 heating of aggregates and/or water is needed.

MAIN FUNCTIONS

- » Aggregate heating with TURBOgas or –steam
- » Generation of warm dosing water

HEATING OPTIONS

- » Heating of batching plant production facilities
- » Generation of warm wash water
- » Supply of warm water for filling of truck mixer saddle tank
- » Heating of other associated facilities e.g. offices, laboratories etc.
- » Production of warm utility water

PME-MAX 1000*	PME-MAX 1250**	PME-MAX 1500**	PME-MAX 2000**	PME-MAX 2500**
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CAPACITY

1000 kW	1250 kW	1500 kW	2000 kW	2500 kW
aggregates 100...1000 kW	aggregates 125...1250 kW	aggregates 150...1500 kW	aggregates 200...2000 kW	aggregates 250...2500 kW
water 0...900 kW	water 0...1125 kW	water 0...1350 kW	water 0...1800 kW	water 0...2250 kW

FUEL

Light fuel oil, biodiesel (max rated oil flow)				
100 l/h	125 l/h	150 l/h	200 l/h	250 l/h
Natural gas (max rated natural gas flow)				
100 m³/h	125 m³/h	150 m³/h	200 m³/h	250 m³/h
natural gas pressure: 2-4 bar (g); min. 0,8 bar (g)				
Options: <ul style="list-style-type: none"> » Fully integrated oil tank located inside TURBOcontainer (oil tank volume 4 000 l/20' container or 10 000 l/40' container); separated with fire wall and equipped with all necessary safety etc accessories » Combi-burner for dual fuel operation: light fuel oil or natural gas » Gas-burner for propane or other gaseous fuels 				

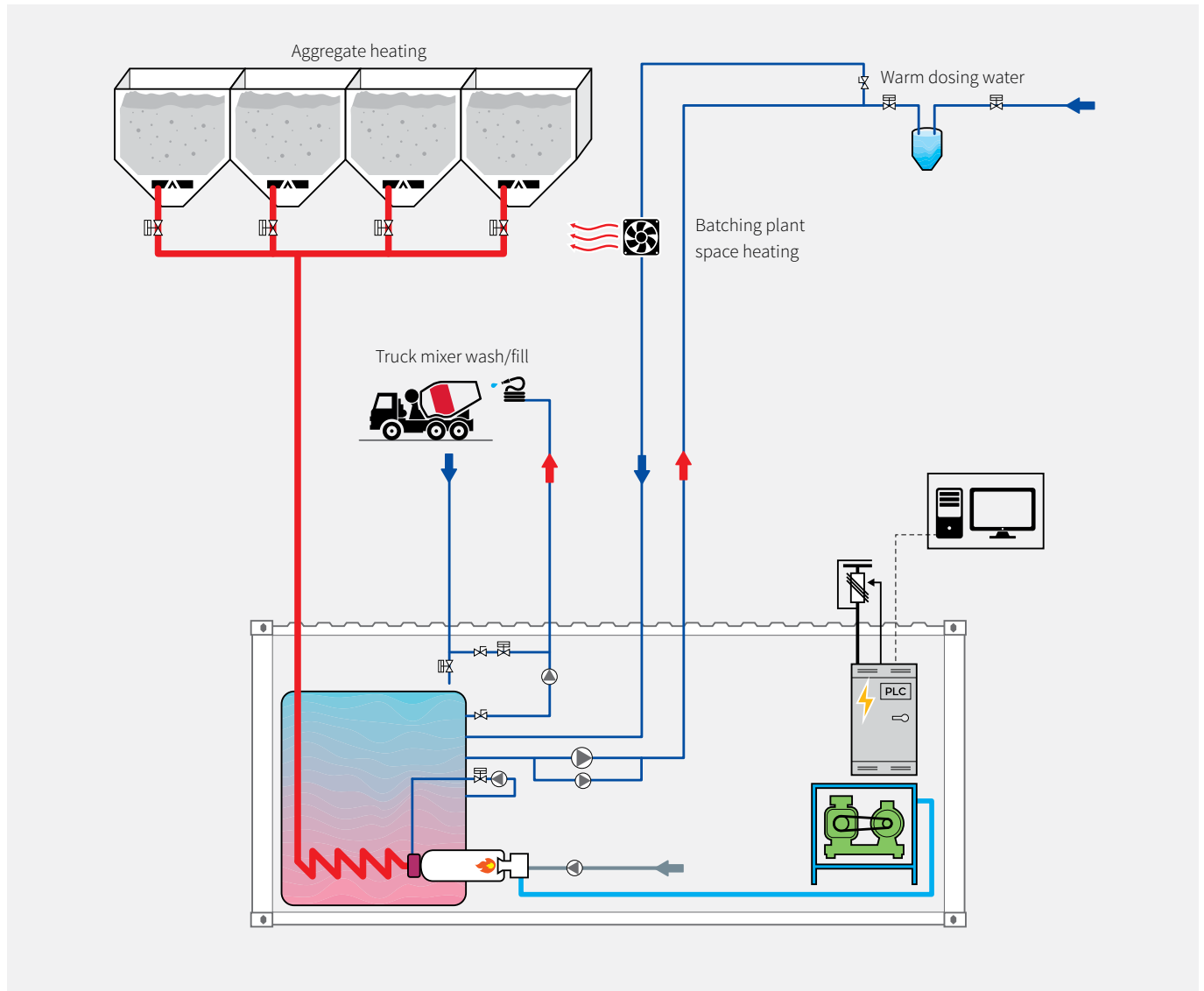
STRUCTURE / LAYOUT

TURBOcontainer <ul style="list-style-type: none"> » thermally insulated, for outdoor usage » side door for easy access » standard 20' (l 6050 x w 2438 x h 2592)* or standard 40' (l 12192 x w 2438 x h 2592)** container also special containers as per customer requirements. » painted as per customer requirements (acc. to RAL-specification)



compactTURBOMATIC (“COM”) thermal energy unit

Economical solution for production of warm concrete with optimum water-to-cement-ratio in moderate climate conditions and handling of all other batching plant heating and warm wash water needs.



APPLICATION

Suitable for moderate ambient temperature conditions and applications with low to moderate heating requirements.

MAIN FUNCTIONS

- » Aggregate heating with TURBOgas or –steam
- » Generation of warm dosing water

HEATING OPTIONS

- » Heating of batching plant
- » Generation of warm wash water
- » Supply of warm water for filling of truck mixer saddle tank

PME-COM 300	PME-COM 500	PME-COM 750
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CAPACITY

300 kW	500 kW	750 kW
aggregates 45...150 kW water 105...150 kW	aggregates 75...250 kW water 175...250 kW	aggregates 115...375 kW water 260...375 kW

FUEL

Light fuel oil (max rated oil flow)		
30 l/h	50 l/h	75 l/h
Natural gas (max rated natural gas flow)		
30 m³n/h	50 m³n/h	75 m³n/h
natural gas pressure: 2-4 bar (g); min. 0,8 bar (g)		
Options: <ul style="list-style-type: none"> » Fully integrated oil tank located inside TURBOcontainer (oil tank volume 4 000 l); separated with fire wall and equipped with all necessary safety etc accessories 		

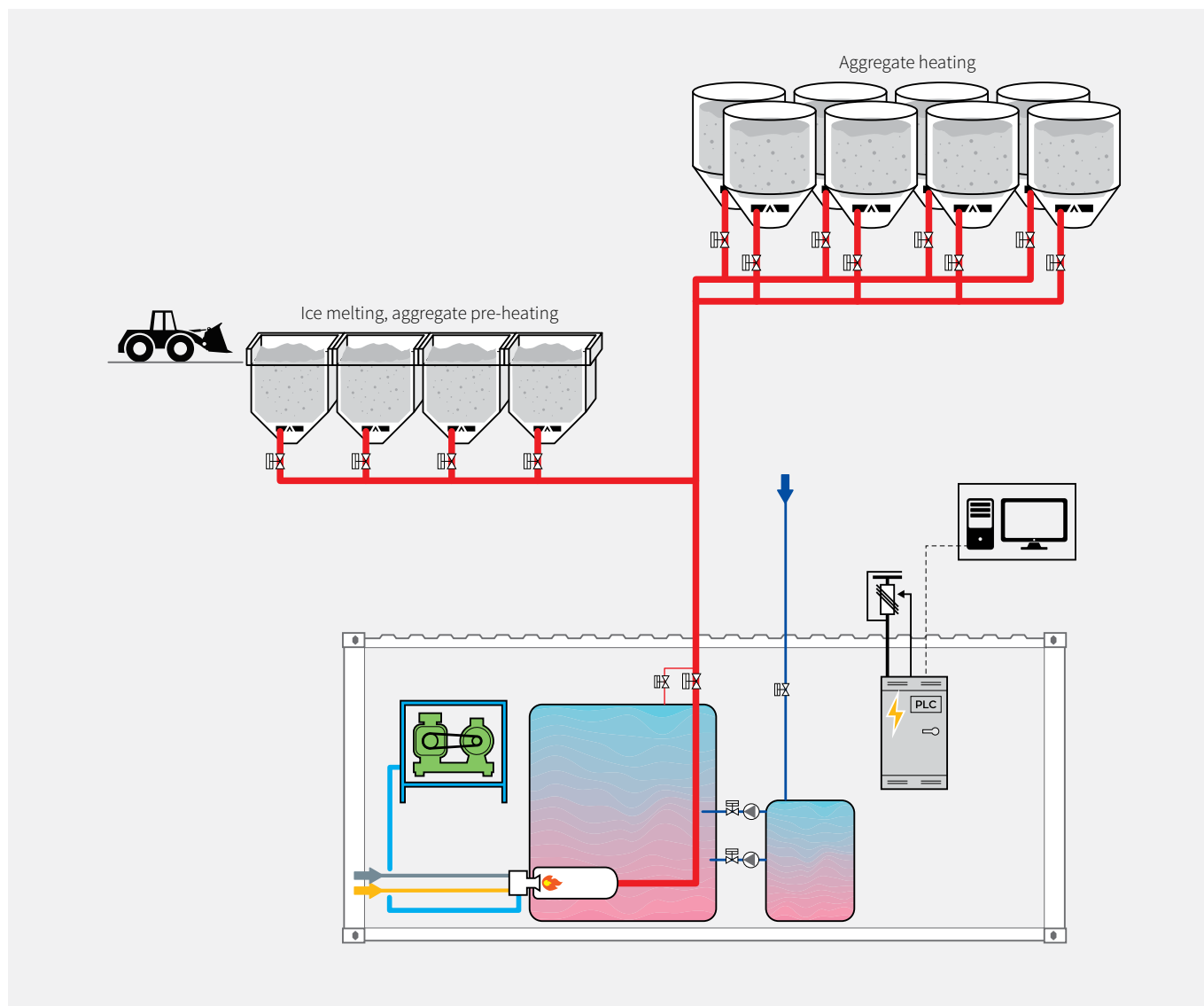
STRUCTURE / LAYOUT

TURBOcontainer <ul style="list-style-type: none"> » for outdoor usage; equipped with electrical heater » standard 20' (l 6050 x w 2438 x h 2592) container » standard colour: RAL 9002 TURBORack <ul style="list-style-type: none"> » for indoor installation » rack dimensions (l 2100 x w 2500 x h 1900); also special rack dimensions as per customer requirements
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TURBOMATIC TURBOsteam generator (“TSG”)

Optimum solution for aggregate heating in batching plants operating in moderate to extreme climate conditions.



APPLICATION

Suitable for extreme climate conditions and when high power, continuous 24/7 heating of aggregates is needed.

MAIN FUNCTION

- » Aggregate heating with TURBOgas or –steam

PME-TSG 300	PME-TSG 500	PME-TSG 750	PME-TSG 1000	PME TSG-1250	PME TSG-1500	PME TSG-2000	PME-TSG 2500
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CAPACITY

300 kW	500 kW	750 kW	1000 kW	1250 kW	1500 kW	2000 kW	2500 kW
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FUEL

Light fuel oil (max rated oil flow)							
30 l/h	50 l/h	75 l/h	100 l/h	125 l/h	150 l/h	200 l/h	250 l/h
Natural gas (max rated natural gas flow)							
30 m³n/h	50 m³n/h	75 m³n/h	100 m³n/h	125 m³n/h	150 m³n/h	200 m³n/h	250 m³n/h
natural gas pressure: 2-4 bar (g); min. 0,8 bar (g)							
Options: <ul style="list-style-type: none"> » Fully integrated oil tank located inside TURBOcontainer separated with fire wall and equipped with all necessary safety etc accessories » Combi-burner for dual fuel operation: light fuel oil or natural gas » Gas-burner for propane or other gaseous fuels 							

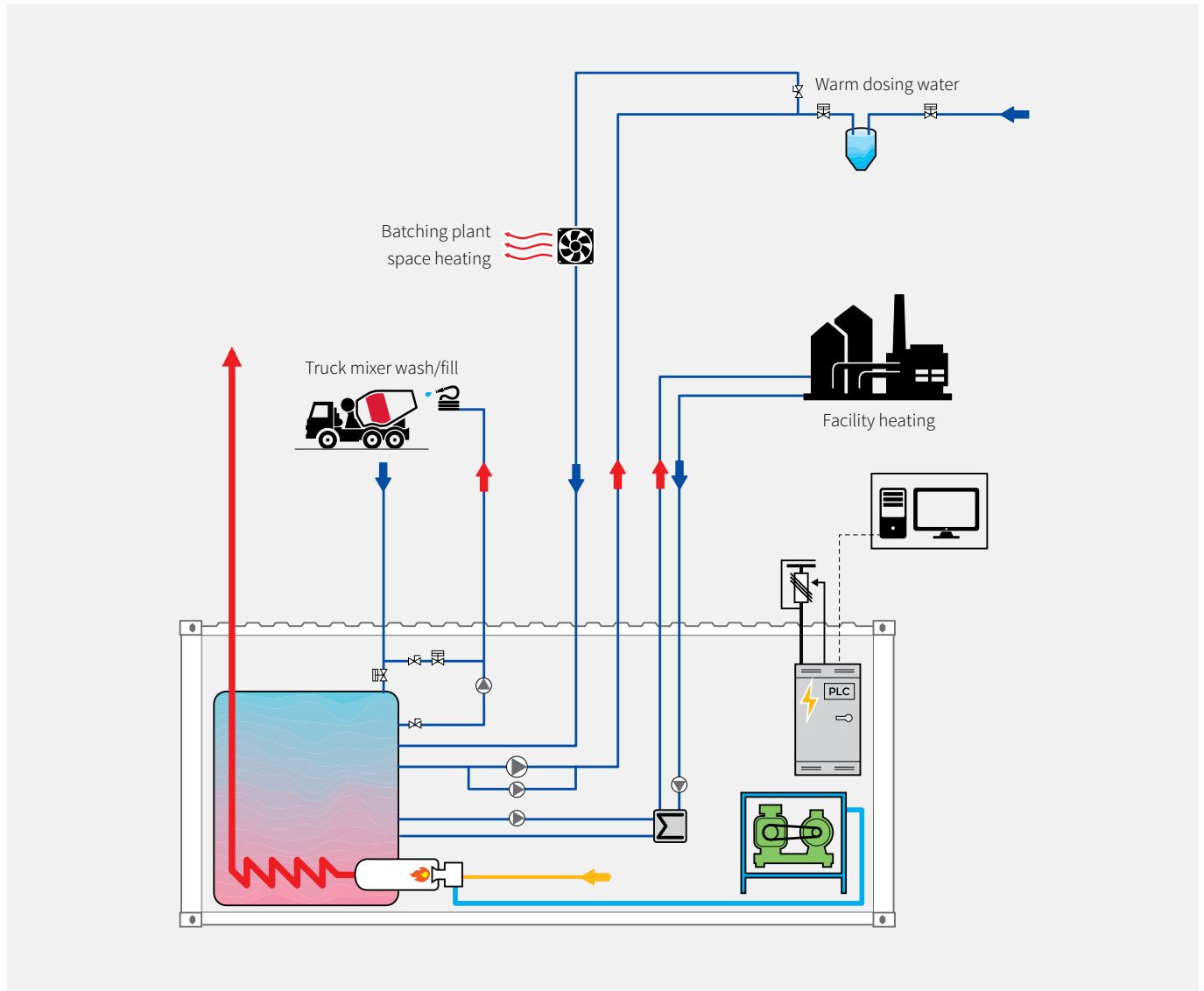
STRUCTURE / LAYOUT

<ul style="list-style-type: none"> » thermally insulated, for outdoor usage » side door for easy access » standard 20' (l 6050 x w 2438 x h 2592) also special containers as per customer requirements. » painted as per customer requirements (acc. to RAL-specification)
TURBOrack <ul style="list-style-type: none"> » for indoor installation » rack dimensions (l 5000 x w 2120 x h 2400); also special rack dimensions as per customer requirements



TURBOMATIC TURBOWarm water Unit (“WAT”)

Solution for generation and storage of warm dosing water in batching plants operating in moderate to severe climate conditions; also capable of handling all other batching plant heating and warm wash water needs.



APPLICATION

Generation and storage of warm water for process, heating and utility purposes.

MAIN FUNCTION

- » Generation of warm dosing water

HEATING OPTIONS

- » Heating of batching plant production facilities
- » Generation of warm wash water
- » Supply of warm water for filling of truck mixer saddle tank
- » Heating of other associated facilities e.g. offices, laboratories etc.
- » Production of warm utility water

PME-WAT 300	PME-WAT 500	PME-WAT 750	PME-WAT 1000	PME-WAT 1250	PME-WAT 1500	PME-WAT 2000
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CAPACITY

300 kW	500 kW	750 kW	1 000 kW	1 250 kW	1 500 kW	2 000 kW
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FUEL

Light fuel oil (max rated oil flow)						
30 l/h	50 l/h	75 l/h	100 l/h	125 l/h	150 l/h	200 l/h
Natural gas (max rated natural gas flow)						
30 m³n/h	50 m³n/h	75 m³n/h	100 m³n/h	125 m³n/h	150 m³n/h	200 m³n/h
natural gas pressure: 2-4 bar (g); min. 0,8 bar (g)						
Options: <ul style="list-style-type: none"> » Fully integrated oil tank located inside TURBOcontainer separated with fire wall and equipped with all necessary safety etc accessories » Combi-burner for dual fuel operation: light fuel oil or natural gas » Gas-burner for propane or other gaseous fuels 						

STRUCTURE / LAYOUT

TURBOcontainer <ul style="list-style-type: none"> » thermally insulated, for outdoor usage » side door for easy access » standard 20' (l 6050 x w 2438 x h 2592) or » 40' (l 12400 x w 2438 x h 2592) container; also special containers as per customer requirements. » painted as per customer requirements (acc. to RAL-specification)
TURBORack <ul style="list-style-type: none"> » for indoor installation » rack dimensions (l 4170–5400 x w 2120 x h 2400); also special rack dimensions as per customer requirements





INCREASED PRODUCTION. HIGHER QUALITY CONCRETE. SIGNIFICANT SAVINGS.

The TURBOMATIC heating system provides the most efficient and cost-effective heating solution for batching plants ensuring both production and quality.

THE NUMEROUS BENEFITS DIFFER FROM CASE TO CASE DEPENDING ON THE SELECTED SOLUTION AND THE CUSTOMERS NEEDS:

- » Increased annual concrete production - no reduction in concrete production capacity even during the coldest of winters due to superior heating power
- » Production of high quality concrete with optimum water-to-cement ratio and temperature at required capacity and at all ambient (temperature) conditions however cold
- » Significant savings in fuel consumption – as high as 60-80% compared to conventional steam and air based heating systems
- » Lowest possible operating costs - due to no annual inspections, no separate, certified operating personnel
- » Lowest possible maintenance costs - designed and built for demanding conditions utilizing only high quality components and equipment
- » Environmentally friendly - due to lowest possible fuel consumption, lowNOx-burner technology, no generation of any wastes whatsoever
- » Fully automatic, PC-operated – and thus fast, flexible and reliable as well as easy-to-operate
- » Proven solution with more than thirty (30) years of experience

The TURBOMATIC heating units are built in Tampere, Finland utilizing only first class materials, equipment and components. The TURBOMATIC is globally accepted by authorities and fulfills all necessary rules, regulations and standards - both international and local: TUKES, EN, GOST, TSSA, CSA, UL etc.

The TURBOMATIC is not classified as a boiler or pressure vessel.



FOR CUSTOMERS WORLD WIDE.

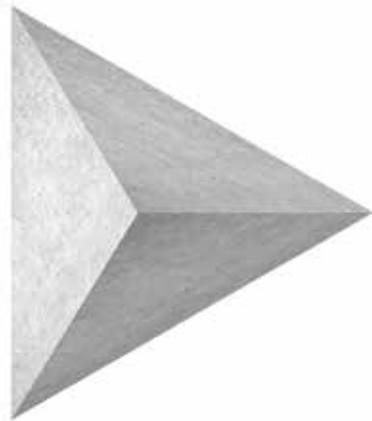
Optimum solution with first-class service and support.



INCREASED PRODUCTION. HIGHER QUALITY CONCRETE. SIGNIFICANT SAVINGS.



Austria / Belarus / Belgium / Bulgaria / Canada / China / Denmark / England / Estonia / Finland
Germany / India / Italy / Latvia / Lithuania / Netherlands / Norway / Poland / Romania / Russia / Scotland
Sweden / Switzerland / Ukraine / USA



OPTIMIZING THE CONCRETE BUSINESS

Polarmatic Oy is a world leading developer and supplier of innovative heating, curing, cooling, control and information management solutions specifically developed for the concrete industry. Already for more than 30 years.

Polarmatic offers total solutions - from process design & sizing of equipment and systems, to equipment delivery, installation and implementation of fully functional systems, complemented by preventive maintenance and technical services. The innovative, high quality solutions enable customers to increase their annual production and produce higher quality concrete and concrete products in the most environmentally friendly manner - while at the same time save significantly in fuel, operating & maintenance costs.

Polarmatic's solutions are today utilised by ready-mix producers in batching plants and by producers of precast concrete products, pipes, blocks and pavers all over the world. Proven even in the most demanding conditions.

Efficiently. Reliably. Flexibly.



Mixing Concrete & Consistency.....Together!

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www.concretebatch.com

WWW.POLARMATIC.FI