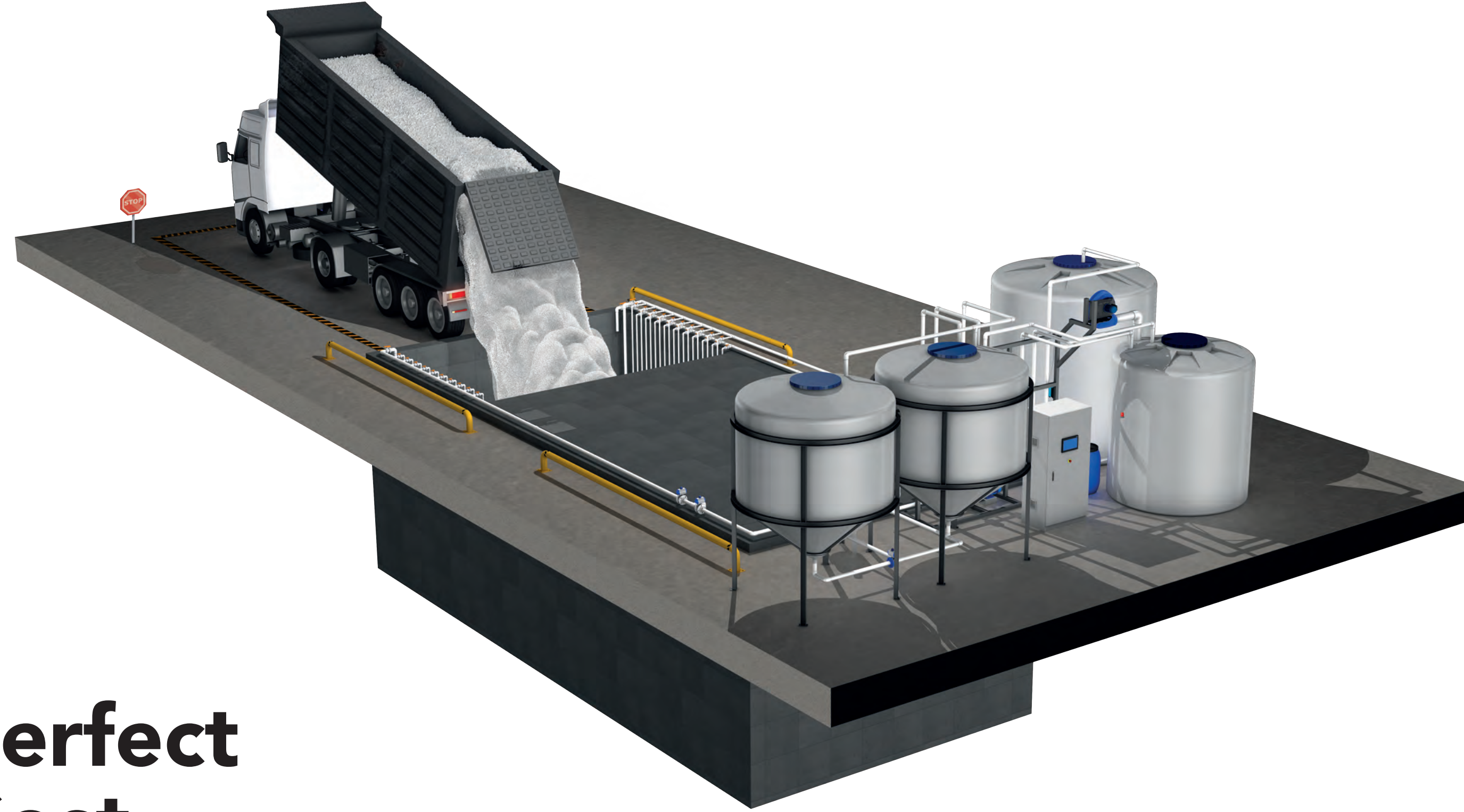




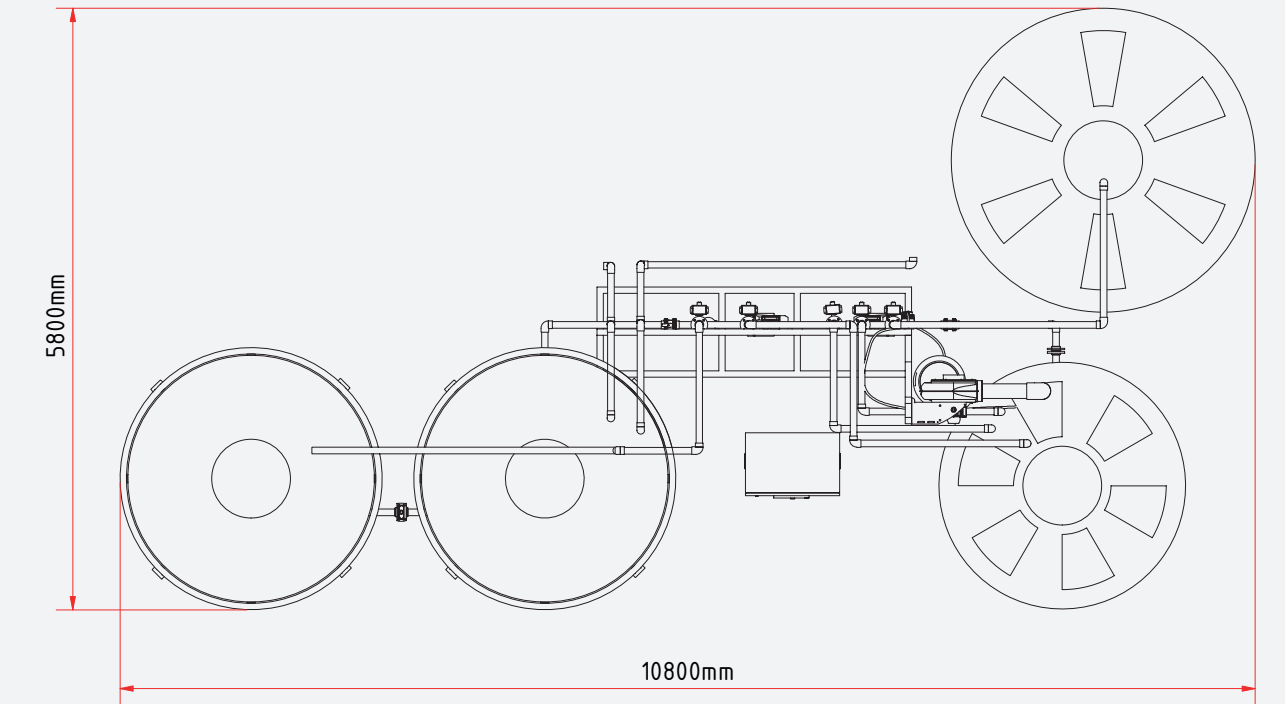
# SALT RAFINATION

SALT REFINING AUTOMATION SYSTEM

## Perfect Cost Optimization.



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## THE BEST SYSTEM TO OPTIMIZE YOUR SALT COSTS

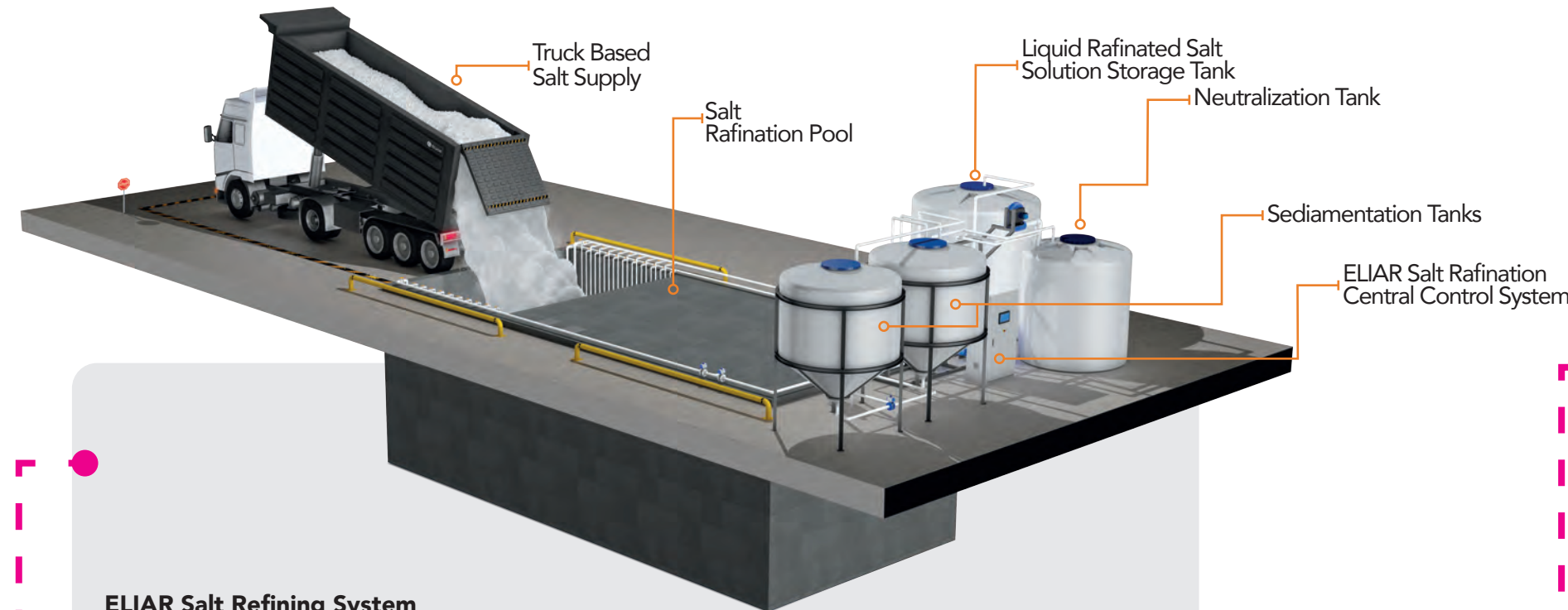
Salt, which is used in very high amounts in fabric and yarn dyeing processes and thus brings a serious cost burden, still maintains its importance in dyeing processes despite all these difficulties in its use. Considering factors such as high consumption quantities, high stock cost and large area to be reserved for stock, difficulties in balancing moisture content, and high cost of ready-made salt purchased in bags, refining the salt supplied in raw form in-house and making it ready for use is the optimum solution. Eliar, which is among the world leaders with the products it produces for the textile industry, ensures that the textile enterprises to work with maximum efficiency with the Salt Refining Automation System it has developed. In this way, you can reduce your salt costs, eliminate supply and stock problems, and have a salt refining facility where you can obtain ready-to-use salt which is suitable to be used in dyeing processes with minimum labor and energy.

## DESIGNED FOR MAXIMIZING YOUR PRODUCTION EFFICIENCY

With the ELIAR Salt Refining Automation System, the process of refining the salt which is supplied to your factory in raw form, and is cheap compared to its alternatives but not suitable to be used in dyeing processes, is provided with a very high efficiency and your costs are perfectly optimized. ELIAR Salt Refining Automation System ensures that raw salt (raw - rock, etc.) is dissolved in water to the degree of saturation, and then it is purified from any hardness and turned into the high quality liquid salt which is suitable for dyeing processes. The raw salt supplied to the enterprise on a truck basis is discharged directly into the dissolving pool and immediately afterwards, the water circulation is started to dissolve the raw salt. Next, the circulation unit continuously pumps and circulates the water condensed by the dissolution of the salt. The same water is circulated repeatedly by internal circulation pumps until the desired concentration and Baume is achieved, in addition, fresh water also can be added to the solution pool from time to time within the target Baume limits to increase the dissolution rate. The solution, which is saturated with the circulation in the dissolution pool and brought to the target Baume value, is pumped to the sedimentation tanks by means of the dissolution unit pumps, which are used to circulate the solution at the same time, in order to remove the impurities in it and make its hardness suitable for use in textile processes. During the sedimentation process, the solution is circulated in the sedimentation tank with the appropriate chemicals to bring the solution to a hardness suitable for use in dyeing processes, then the liquid salt is kept in the sedimentation tank for a while and its hardness is measured. The pH level of the brine solution is still high for use in dyeing operations after the required hardness levels have been verified. For this reason, the solution, whose sedimentation process is completed, is transferred to neutralization tanks in order to make the pH level suitable for using in dyeing processes, and neutralization is carried out by using appropriate chemicals in the neutralization tanks. Finally, the solution, whose neutralization process is completed, is pumped to the stock tanks and becomes ready for being used in textile processes. As a result, the salt solution which is purified from all its impurities, brought to the desired concentration and pH value and ready for use in the liquid salt stock tanks, is being dispensed to your dyeing machine side tanks by ELIAR SLD Mineral dispensing system full automatically, untouched and trouble-free.

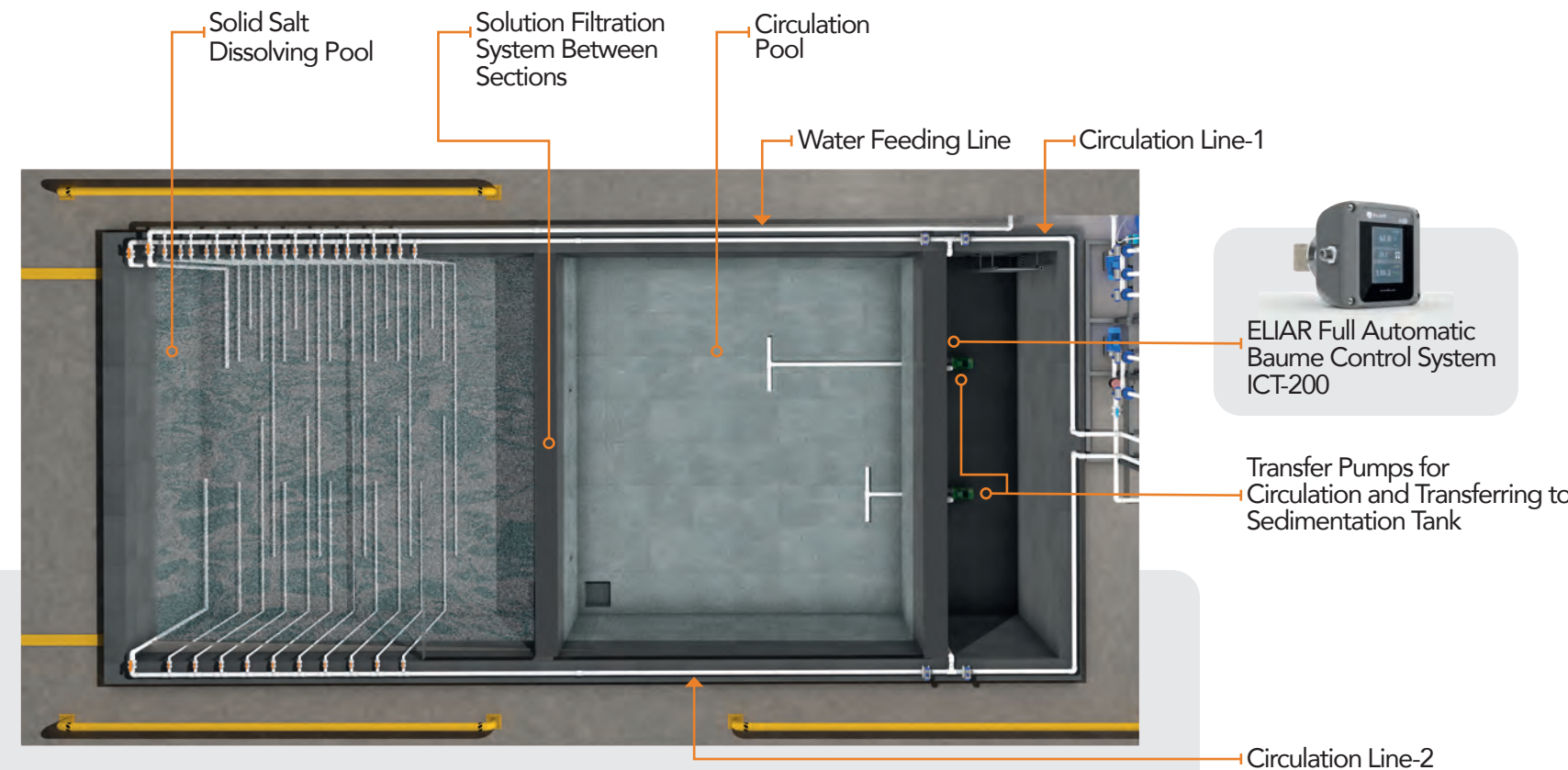
## HIGH CAPACITY & RELIABLE PROCESS

The Salt Refining Automation System, produced with the engineering and assurance of Eliar, is the most reliable and flexible salt refining system. Eliar, which is among the world leaders with the products it produces for the textile industry, ensures that the enterprises work with maximum efficiency with the Salt Refining System it has developed. With the Eliar Salt Refining system, you can have a production line where you can easily optimize your salt costs and at the same time completely eliminate all errors and accidents.



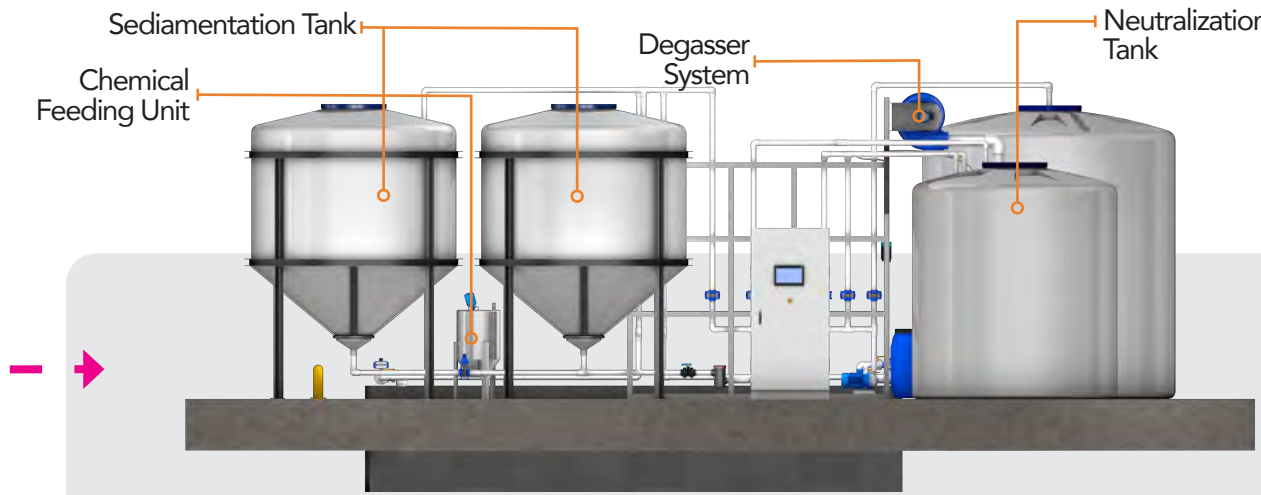
### ELIAR Salt Refining System

ELIAR Salt Refining System, which enables the dissolution of raw salt (raw - rock, etc.) in water to the degree of saturation and then removing any hardness and turning it into quality liquid salt for dyeing processes, is configured with its main elements which are dissolution pool, sedimentation tanks, neutralization tanks, circulation/transfer installations and pumps, refined liquid salt stock tanks and central control unit.



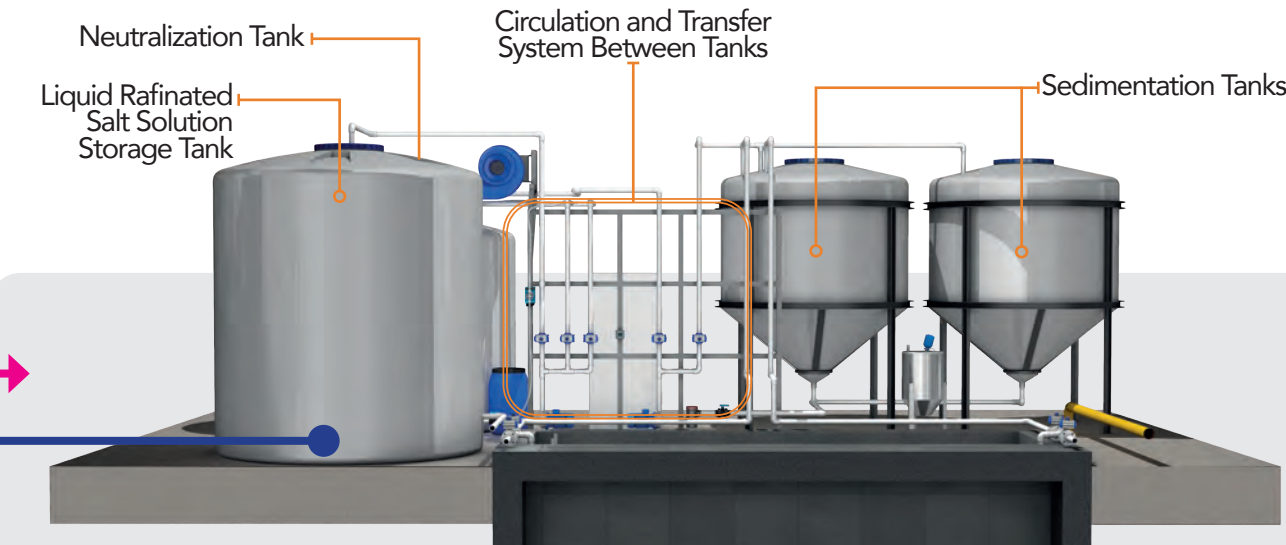
### Salt Refining Dissolving Pool

The raw salt is first discharged from the truck into the dissolution pool. Water circulation is very important to dissolve the raw salt. The circulation unit continuously pumps and circulates the water condensed by the dissolution of the salt. The same water is circulated repeatedly to achieve the highest concentration and Baume, and fresh water also can be added from time to time within the target Baume limits to increase the dissolution rate. These circulation pumps are also used to transfer liquid salt to sedimentation tanks. After the circulation and dissolution processes are completed, the liquid salt is transferred to the sedimentation tanks to remove all impurities and hardness.



### Sedimentation Process

The solution saturated with the circulation in the dissolution pool is pumped to the sedimentation tanks by means of the dissolution unit pumps in order to remove the impurities in it and to optimize its hardness. Here, circulation is carried out with the relevant chemical feeding. When the sedimentation is complete, the liquid salt is kept in the sedimentation tank for a while and the hardness is measured. After confirming the suitability of the required hardness levels, the liquid salt is transferred to the neutralization tanks in order to adjust the pH level.



### Neutralization Process

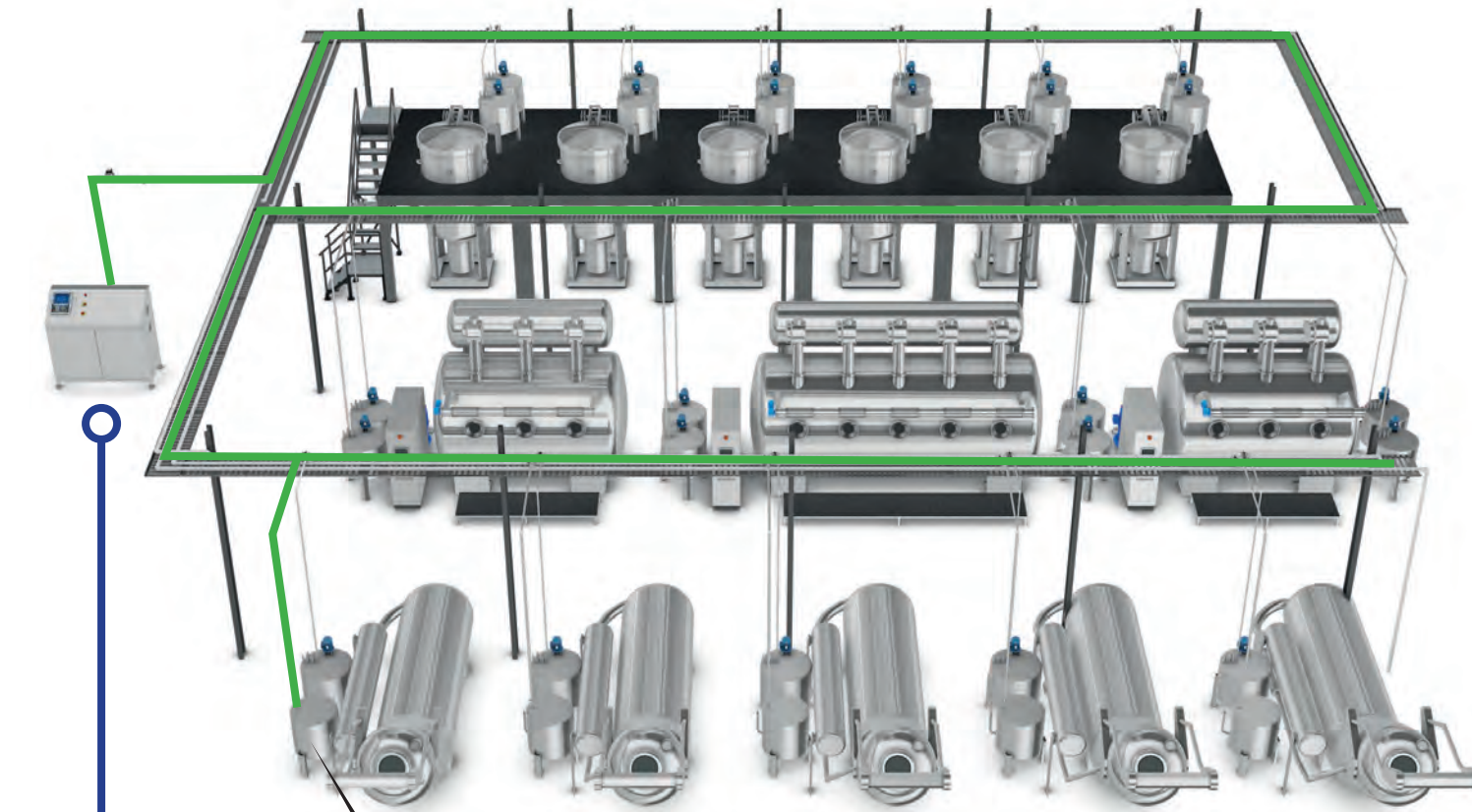
After sedimentation, the pH of the brine solution is still high for using in dyeing processes. In order to bring the pH to the appropriate range, the neutralization process is carried out by feeding the relevant chemicals. After the neutralization process, the solution is ready to be pumped into stock tanks and used in textile processes.



Our Recommended System with Salt Refining System >SLD Mineral

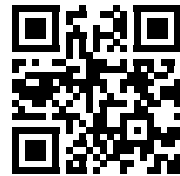
### SALT DISTRIBUTION LINE

The transfer of the salt solution, which is ready to use in the stock tanks, can be carried out full automatically with the SLD Mineral mineral dispensing system. The liquid salt solution, weighed with SLD Mineral and injected into the customized individual salt distribution line, is transferred to the addition tank of the relevant dyeing machine without any problems, thanks to the distribution valves specially designed for mineral distribution and full automatic valve control.



DISPENSING TO THE DYEING MACHINE ADDITION TANK

You can watch our **SALT RAFFINATION** promotional video by scanning the QR code on your mobile device.



## PERFECT PROJECTS WITH EXPERT ESTABLISHMENT IN THE TEXTILE INDUSTRY

Aligned with its vision for the future, with the awareness that the only way to progress is the triangle of qualified knowledge, qualified workforce and optimum cost, Eliar, thanks to its wide engineer staff specialized in their fields and the R&D center that directs technology, shares its deep application experience with you from the projects it has carried out in different parts of the world. During the selection and projecting of the most suitable powder mineral automation system, Eliar also cooperates you in every aspects of your automation project and with its technical team specialized in textile automation systems, takes the responsibility of all design, project and engineering works, installation stages and commissioning processes from the production of your project until the delivery stage and always offers you turn-key automation projects.

## READY FOR FUTURE

ELIAR Salt Refining System is 100% compatible with the Industry 4.0 concept and is ready for possible future enhancements to software applications in your enterprise. It is integrated into Eliar dyehouse supervisory software to automatically generate reports on actual consumptions, process monitoring and control data.