

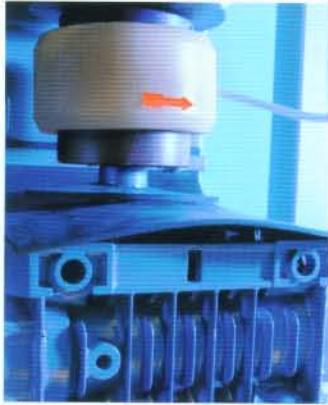


ZIEGRA

EISMASCHINEN

IceSystems:
Automatic Solutions
by ZIEGRA

Cool from start to finish



ZIEGRA has created various types of systems geared towards meeting the goals of your company. We provide turn-key ice solutions; starting with type of ice machine, and on to differing ice types, storage options

and automatic ice delivery systems. Whether you want to keep fish, meat, vegetables or baked goods fresh, process them or manufacture them: ZIEGRA offers you the right system for cooling and freshness.



A healthy heart: The ice machine

At the heart of an ice plant is the ice machine itself. Depending on your production requirements the most suitable type of ice machine is available to you:

△ For small or large ice requirements: The right capacity machine can be found in our standard range, with daily capacities from 30 to 10.000 kg.

△ Our modular construction also allows for capacities far in excess of 10.000 kg.

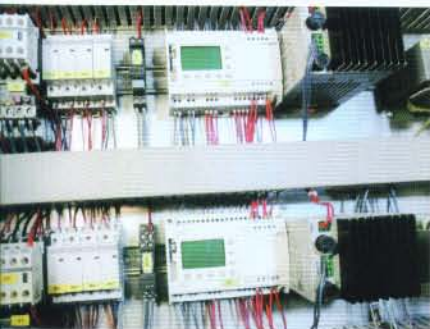
△ Machines with dual refrigeration circuits provide you the highest degree of operational reliability.

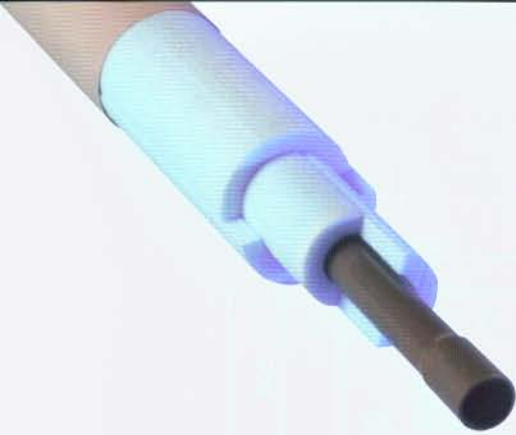
△ Special executions for warm ambient environments guarantee you full capacity. Especially when you need it most e.g. when the external temperature is high.

△ We comply with your requirements: with compact machines, remote installations, externally mounted condensers or ice makers to connect to your present cooling systems, and much more.

△ And: we stick to our heritage, using static evaporators with no rotating parts in the refrigeration circuit in order to prevent leaks and loss of refrigerant.

We will help you make good decisions.

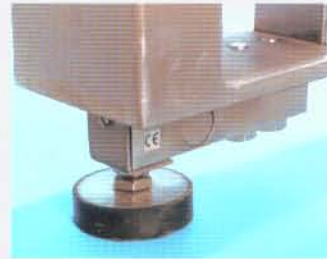




Cool Solutions: Automatic Dosing

In order to be able to provide automatic dosing we need to understand your requirements and to define interfaces to hardware and process control –

we plan with you. ZIEGRA ice systems are of modular design and can be tailored to suit your individual needs and operational requirements.



One touch cooling: What you can achieve with systems from ZIEGRA

Improved hygiene:

Ice is not moved by hand; parts of the system are sealed and contamination from extraneous matter is avoided.

Reduction in personnel costs:

With such easy handling of ZIEGRA ice labour time is reduced.

Increased productivity:

Through faster ice dosing and more efficient cooling, production cycles can be shortened.

Quality assurance:

Fully integrated into your process control system automation minimises potential errors. Furthermore, ice usage is recorded, providing a high degree of traceability.

Handling made easy:

Arduous handling of ice is eliminated. Working conditions are improved.

In short: Cooling with ZIEGRA is cooling at the touch of a button. As simple as it is efficient, as sophisticated as it is economic.



ing systems from ZIEGRA

ZIEGRA IceStation: Easy handling

This system is available in any size and comprises an ice machine and an ice store on a frame for easy ice removal of any amount. Pre-production of large amounts is made possible and handling made

easier with insulated ice carts. The ZIEGRA IceStation is an ideal solution in the fish trade, for retail displays and in food processing.



ZIEGRA IceSupply: Ice dosing System (without transport)

ZIEGRA IceSupply is ideal for the automatic removal of ice from pre-produced supplies. Every machine size is possible. It comprises an ice silo with automatic delivery (500 – 20.000 kg). At the touch of a button the ice is conveyed by an extraction auger to a delivery point e.g. an ice cart. The silo can be complemented with a load cell and

PLC control; the semi-automatic system is thus extended to a fully automatic one and ice is delivered directly into the production process e.g. for filling fish transportation boxes. Or in bakeries or butcher's for feeding into mixers and bowl choppers as well as for filling boxes in vegetable packing.

ZIEGRA IceDynamic: Ice Dosing Systems (with transport)

A complete system with weighing and PLC like the IceSupply but extended by the addition of ice transportation e.g. via pneumatic delivery or screw conveyor. This makes the production point independent of the delivery point. The system is designed for ice delivery at several dis-

charge points and for connection to process control systems for ice dosing. It has been proven to be extremely successful in bakeries where there are several dough lines and for automatic dosing in sausage factories and chemical processing.



ZIEGRA StreamIce®-Systems: Ice in flow

The fastest dosing and cooling. Supplies to several and even remote delivery points using simple technology: ZIEGRA StreamIce-systems fulfil the highest demands of precision and flexibility: they combine the advantages of ice and cold water: high, extremely quick cooling and simple dosing. StreamIce is made from saltwater or fresh

water depending on the requirement. It is kept homogenous in an agitator tank and pumped on demand to delivery points. Flow meters and insulated ring mains ensure precise dosing and efficiency. Ideal for the immediate cooling of fish (including on-board), or feeding into bakery mixers and even for cooling double wall vessels.

ZIEGRA IceFactory: the complete solution

IceFactories are turn-key projects with buildings, for the production and supply of larger quantities of ice, from 5 to 40 tonnes and more. Ice factories can, with the addition of load cells and transport devices, also be extended to create a fully automatic system or a self-service operation (card

system). Our IceFactories are key installations in fishing harbours for example, for supplying ice to trawlers or for processing the fish, as well as for feeding reactors in chemical operations.



ity.

Liquid ice or particles? Chip ice and StreamIce®

Chip ice has an ideal temperature of -0.5°C . Storage and supply of ice is possible over several days without the need for sub-cooling – and without freezing together or lumping. An essential prerequisite for making automatic systems possible.

The amount of any investment can be kept to a minimum as larger amounts of chip ice can be accommodated by smaller machines producing ice overnight or over days, in advance of requirements. Chip ice possesses an outstanding cooling capacity because it is pure ice. It does not burn or damage goods and is sparing on cutting blades and machinery.

In addition, the most suitable size of chip ice can be chosen for the application.

StreamIce® is above all pumpable and easy to dose. It completely envelops the product and provides the most rapid cooling through tiny ice crystals which melt immediately, and provide total surface area contact. StreamIce is fast dissolving – mixing and kneading times can be significantly reduced, cooling of fish after catching can be reduced to a few minutes and shelf-life noticeably lengthened. Depending on the salinity of the water temperature ranges from 0 to -3°C .



All ice is not the same



Macrolce

Pieces of ice up to 9.5 mm thick. It is particularly good for lengthy storage and is excellent for cooling over long periods of time e.g. for transporting fish and for retail displays.



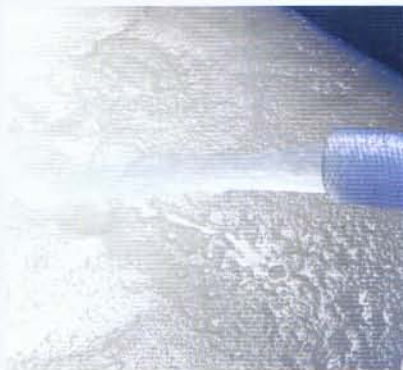
Microlce

Microlce consists of small ice pieces with an average size of approximately 5 mm. It mixes well, dissolves and cools rapidly. Microlce is the most appropriate one for mixing processes and for delicate goods such as fish fillets.



Standardice

The mix of small and large ice particles guarantees a high degree of cooling with good storage capability – ideal for the bowl chopper and for process cooling.



StreamIce®

StreamIce is a mixture of the smallest ice particles with water, in which the ice density (proportion of ice) is easily variable up to 55% at the machine. It is pumpable and is particularly well suited to immediate cooling (e.g. fish) or immediate dissolving in dough mixers. Salt water or fresh-water can be used to produce StreamIce.

What we don't put on ice: The ZIEGRA philosophy

Only those who take a critical look at the requirements of the customer and take these into consideration at every step can achieve long term success: Welcome to ZIEGRA. Our goal of continuous innovation means we have been setting standards since 1969, with the result that ZIEGRA has become one of the leading manufacturers of ice delivery solutions worldwide. However, we are not complacent. We are continuously monitoring the needs of our customers' industries and trends in automation. With this in mind 80 ice production specialists are employed with the sole purpose of advising, planning and designing for your needs. We offer you the peace of mind of long-term support for your operation and the flexibility to respond to your requirements on an on-going basis.



ZIEGRA IceSystems stand for:

- ▲ **Hygiene** safety through sealed dosing systems as well as reduction or removal of the manual handling of ice. HACCP is promoted.
- ▲ **Efficiency** through the reduction in personnel costs and shorter production cycles.
- ▲ **Satisfied** operators due to simplified ice handling.
- ▲ **Quality** assurance through traceability of ice usage.



What we can do for You?

We... ...get involved in your projects early in the planning phase in order to achieve the optimum cooling results with ice.
... develop your specific modular system.
... manufacture and install with care and paying attention to quality.

... offer our own service to ensure product durability. This includes a 15-year guarantee on parts availability.

We strive to achieve your goals.



ZIEGRA EISMASCHINEN GMBH

Ernst-Grote-Strasse 7
D-30916 Isernhagen (Germany)

Telefon + 49 511 - 90 244-0
Fax + 49 511 - 90 244-90

www.ziegra.com · ice@ziegra.com