

# solutions

THE COOLEST SOLUTIONS YOU NEED





## THE IMPORTANCE OF COOLING IN PLASTICS PROCESSES

The design of the cooling system is very important in plastics processes. Since the cooling time accounts for about

40% ~ 60% of the whole molding cycle, the design of a good cooling system can greatly:







# THE FUNDAMENTALS TO DETERMINE THE BEST COOLING SYSTEM TO YOUR NEEDS



- Know the PROCESS: Knowledge is the base, as every process has its own needs. If you know the process, you cool it and get the best from your production.
- 2. Know the APPLICATION: Pressures, volumes, ambient conditions, processed materials. These factors vary according to the process and to the installation site and are fundamental to select the proper cooling solution.

#### 3. A KLIMA CHILLER is not an INDUSTRIAL PROCESS CHILLER:

There's a great difference between an industrial process chiller and a klima chiller applied to process. A process chiller is expected to work every day, round the clock at the conditions required by your line. A klima chiller is born to work at conditions which are not those of process and it is expected to perform its top actions for 3 – 4 months per year. Components, surfaces of exchange, resistance to heavy climates, real working conditions make the difference. Bear this in mind: an INDUSTRIAL PROCESS CHILLER can safely work as a KLIMA one, but the opposite is not so obvious.



- **4. Price is important but PRODUCTION is more:** Chiller is a small but indispensable part of your line. Think of it: save money and invest in a cooling system which is unable to stand your production is a risk you may accept? **If a chiller stops, production stops and downtime costs raise.**
- **5. Think today for TOMORROW:** The supply of a cooling system must refer to the customer's needs and take into consideration his future expansion, allowing the customer to build his system by steps.
- 6. Save MONEY, reduce ENERGY COSTS, respect the ENVIRONMENT: As the cost of energy is becoming worldwide more and more significant, it is important to invest in energy-saving systems reducing their impact on the ambient and granting to the end-user a considerable reduction on his energy bills.



# THE BENEFITS OF AN EFFICIENT COOLING



Significant increase of production



Significant improvement in quality



Significant reduction of scraps



Significant reduction of energy costs



# **Injection Moulding**

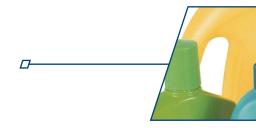
The injection molding of thermoplastic materials is the most widely used technology in plastics processing.





# **Blow moulding and PET**

The blowing of hollow bodies (blow molding) is an important method of polymers processing, used for the production of hollow products.





# **Packaging**

Plastics and packaging are an integral part of everyday life. The production of these materials depends on reliable processes and accurate measurement.





### **Technical Parts**

The process focuses on mass-producing plastic parts. Shorter cycle times are a must as they mean higher productivity and lower cost per part.





# **Thermoforming**

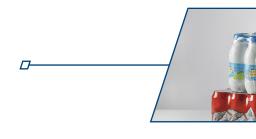
An efficient thermo-cooling control is an essential condition to improve both quality and aesthetics of the thermoformed part as well as to shorten the production cycles.





## **Blown Film**

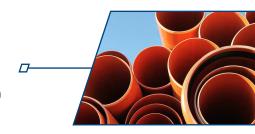
The blown film production covers a wide and varied range of applications: each of them has its specific needs, that's why the choice of the right cooling system is fundamental to get a top-quality and brilliant product.





# **Extrusion of pipes and profiles**

The extrusion of pipes and profiles is a high-volume manufacturing process requiring an efficient cooling system to safeguard the technical performances and the reliability of extruded parts.





#### **REQUIREMENTS:**

- Reliability
- All-in solution
- Save energy and respect the environment



#### **REQUIREMENTS:**

- Accurate temperature control
- Shorten the cycle time
- High pressures and raised flow rates
- Control temperature of moulds using different types of material
- Save energy and respect the environment



#### **REQUIREMENTS:**

- Large cooling capacities
- Control separately the moulds and the oil temperatures
- Glycol-free operation
- Save energy and respect the environment



#### **REQUIREMENTS:**

- Accurate temperature control
- Combined cooling/heating function
- High pressures and raised flow rates
- Beside the machine unit



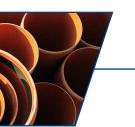
#### **REQUIREMENTS:**

- Use of high pressure pumps
- Accurate temperature control
- Efficient thermal exchange during the cooling phase



#### **REQUIREMENTS:**

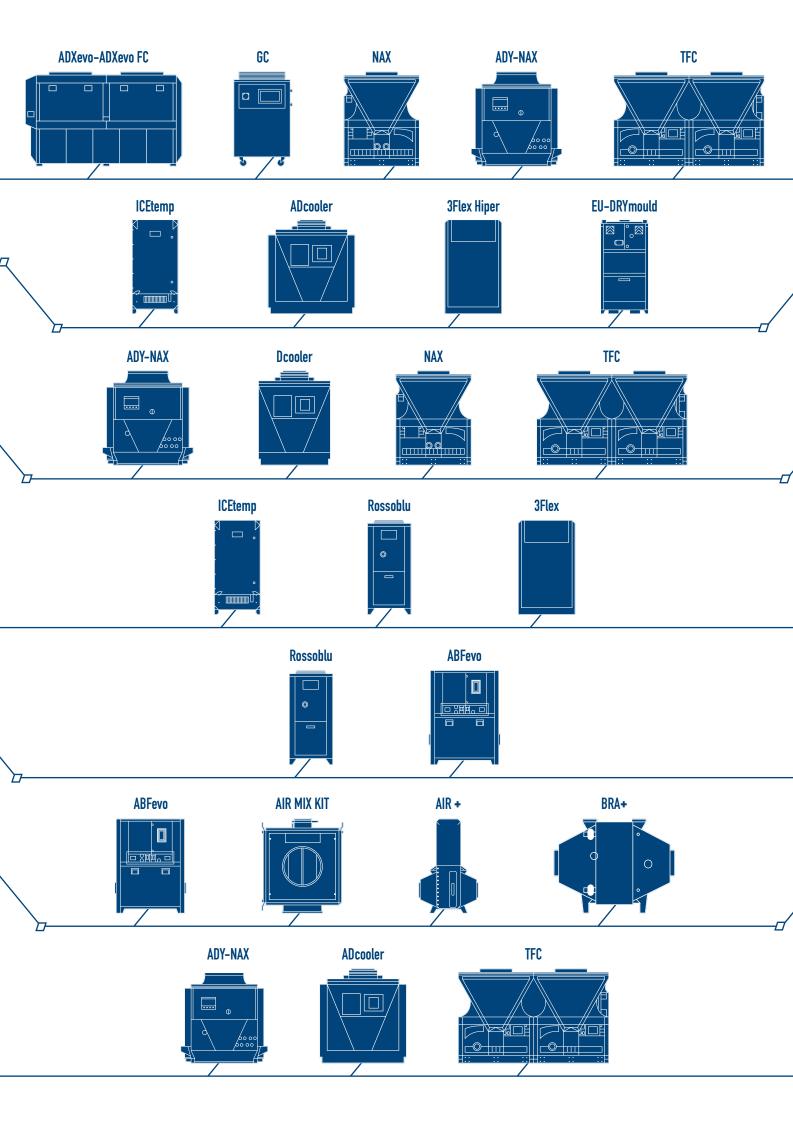
- Get the right solution according to the process requirements
- Cool separately the RING and the IBC
- Accurate temperature control
- Reduce energy consumption

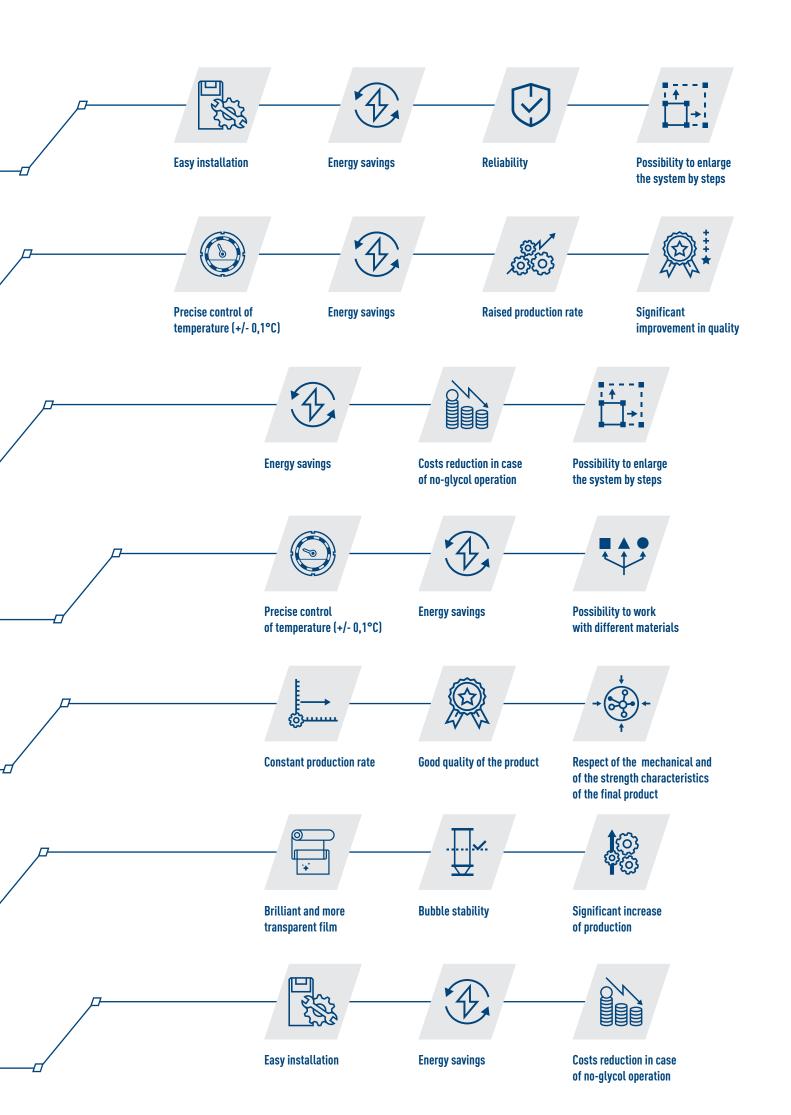


#### **REQUIREMENTS:**

- Large cooling requirements
- Glycol-free operation
- Large water flow rates
- Save energy and respect the environment









# **E**-solutions

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