



***“IMPROVING CONDITIONS FOR STAFF”***



Europe's leading supplier of rigid plastics packaging



Celsius had installed a system of ducted fresh air Inflow units throughout the RPC Containers production area in Rushden, Northants some years before, but as RPC had grown the heatloads within the area had increased as they had installed more bottle blowing machines, therefore, they required more cooling.



To increase the cooling capacity of the fresh air units Celsius installed Evaporative Cooling chillers to the ducting

### **Increased Performance and low running costs**

Evaporative coolers reduce the incoming temperature during the warmer months by as much as 10Co, they also filter the incoming air thus maintaining the high hygiene standards throughout the area. On the day of commissioning the external temperature was 22Co and the units were introducing air at 16Co, before the Celsius coolers were turned on the surrounding internal temperature was 29Co.

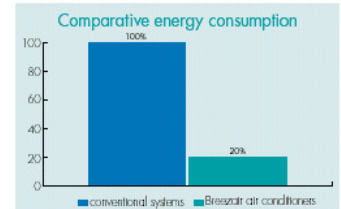
**Simple Installation** – The Celsius evaporative chillers fit simply and easily onto the top of the ducted units on the factory roof, with a minimum of disruption to the internal process.

Evaporative cooling is the most cost effective way of cooling industrial premises and also the most environmentally friendly as each unit only uses 1.5KW of electrical power, a standard water supply and no refrigerant gasses.

## ADVANTAGES OF EVAPORATIVE COOLING SYSTEMS



- Introduces 100% fresh and filtered air
- Doors and windows can stay open
- Maintains some moisture in the air, particularly beneficial to those suffering from allergies and asthma
- Reduce fumes, particles in suspension and odours
- Cooling capacity efficiency is increased as the outdoor temperature rises.
- Low consumption, up to **80% more economical** than conventional equipment
- Easy to install and minimum maintenance
- Reduces static electricity



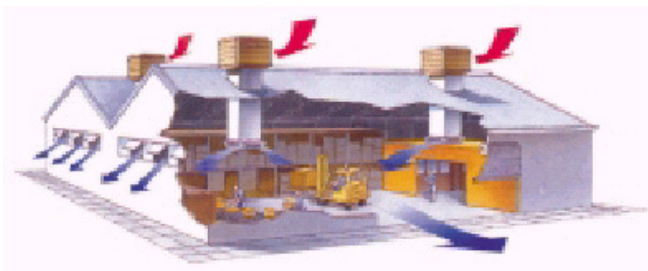
### Conventional cooling systems - disadvantages

- Largely recirculates the same stale air
- Doors and windows have to stay shut
- Dries the air, which is detrimental to people with respiratory ailments
- Recirculated air can carry germs, odours and environmental contaminants
- Its operating effectiveness is reduced as the outside temperature rises
- High energy consumption
- More complex and costly installation and maintenance



## TYPICAL TEMPERATURE REDUCTIONS USING EVAPORATIVE COOLING

Outside ambient temperature °C	Percentage relative humidity						
	20%	30%	40%	50%	60%	70%	80%
20	12,0	13,0	14,5	15,5	16,5	17,5	18,5
25	16,0	17,0	18,5	20,0	21,0	22,0	23,0
30	19,5	21,0	22,5	24,0	25,0	26,5	28,0
35	23,0	25,0	26,5	28,5	30,0	31,5	32,5
40	26,5	29,0	31,0	32,5	34,5	36,0	-
45	29,0	32,5	35,0	-	-	-	-



- **Perfect for:**
  - large factories, industrial complexes
  - printing works
  - plastics and textiles industries
  - laundries
  - farms and glasshouses
  - factory units
  - research centres
  - foundries, etc.

