


Event:
Date:
Place:

ENERGY in BUILDINGS 2016
Saturday November 12, 2016
Athens, Hellas



#	Luigi Nalini Mechanical Engineer	
Title:	CEO at CAREL Industries S.p.A., Brugine (PD), Italy	
Presentation title:	Energy saving through evaporating cooling in comfort and industrial applications	
<p>In the HVAC industry adiabatic evaporation is generally assimilated to air humidification, but recently the process has been used specifically to cool air for free, a crucial aspect in developing green systems with low energy consumption. 100 kg of water that evaporates adiabatically absorbs around 68 kWh of heat from the air, with a negligible power consumption. This application of adiabatic humidification is called evaporative cooling and is used in climate control either to replace or to integrate mechanical cooling. Unlike traditional technologies based on the use of synthetic refrigerants, evaporative cooling features important environmental benefits in terms of global warming potential thanks to the virtual absence of both direct and indirect CO2 emissions.</p> <p>Evaporative cooling works best in hot and dry climates or in environments characterized by an inherent massive heat production. Benefits are ideally maximized whenever the needs for cooling and humidification coexist. Nonetheless further energy savings can be achieved in virtually any situation through the combined use of evaporative cooling and heat recovery, a process called indirect evaporative cooling. If included since the design phase of an air-conditioning system, evaporative cooling techniques allow lower investment costs in smaller cooling devices. In any case they can be easily integrated in existing systems with returns on investments (ROIs) of a few years, if not months.</p>		

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CV:

Luigi Nalini was born in Rome on 8 April 1946, and in 1970 graduated in Mechanical Engineering from 'La Sapienza' University in Rome. He is married and has three children.

He started his professional career in 1971 at the "Centro Studi HIROSS", as R&D Manager, before being appointed to the board of directors (until 1988).

In the mid-1980s he also held the position of Deputy Managing Director of HIROSS Austria.

From 1988 to 1998 he held the roles of Technical Manager and Managing Director at UNIFLAIR Italy.

From 1997 to 2007 he was Managing Director of Astrel.

Since 1998, he has been CEO of the CAREL Group, and was one of the founding partners in 1973. The CAREL Group today employs more than 1,100 people, has manufacturing sites in Italy, the USA, China, Brazil and Croatia, 19 subsidiaries and sales of 203 million euros in 2015 (up 13% from the previous year).

Driven by a sincere passion for research, development and technological innovation in the field of HVAC, he is the inventor or co-inventor of 17 industrial patents, several of which filed internationally.

Collaborations and recognitions

- He has collaborated with the University of Padova Thermodynamics Institute, and together with professor Renato Lazzarin has been a degree thesis co-supervisor on a number of occasions.
- In 2004 he published the book entitled 'Air Humidification', written in collaboration with professor Renato Lazzarin.
- He has been a member of AICARR (Italian Air-conditioning, Heating and Refrigeration Association) for many years.
- Since 2015 he has been a member of the EPEE (European Partnership for Energy and the Environment) Steering Committee.