



## COOLING DEGREE DAYS AND HOURS FOR LATVIA

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### ABSTRACT

Calculation of cooling degree days is currently one of the most commonly used methods in heating, ventilation and air conditioning (HVAC) industry to describe the effect of outside air temperature on building cooling energy consumption. This paper presents values of cooling degree days and hours that were calculated using data of outdoor air temperature, measured at meteorological station in Riga (Latvia) during the period of last 10 years. Three base temperatures were used, i.e. 25,5°C, 26,0 and 27,0°C, corresponding to recommended design values of indoor temperatures for office buildings, prescribed by European standard in the field of indoor climate. Some fluctuations in a number of cooling degree days were found by comparing them to the values calculated as cooling degree hours. In addition, tendencies in a number of cooling degree days are presented, analysing the weather data for past summers. Yearly cooling degree days are given in a tabular form. This data could further complement the local building norms and regulations regarding design of HVAC systems and energy efficiency, filling the gap of missing information for methodology of simplified energy calculations in buildings.

Key words: cooling degree days and hours, energy consumption, HVAC systems.