



Šaldymo sistemos ir baldai, įranga parduotuvėms, vėdinimas-kondicionavimas, profesionali virtuvės įranga. Projektavimas, gamyba, tiekimas, instaliavimas, techninis aptarnavimas.

## EUROVENT STANDARTAI ŠALDYMO GARINTUVAMS (ANGLŲ KALBA)

### 1. DEFINITIONS

#### Unit Air Cooler

A refrigeration system component transferring heat from air to a refrigerant or liquid consisting of one or more fans and a coil with refrigerant distributing and collecting headers.

#### Standard capacity

Cooling capacity for standard temperature conditions (dry conditions).

#### Nominal capacity

Standard capacity multiplied by a fixed ratio (wet conditions).

#### Fan power

The electric power absorbed by the fan motor

### 2. TESTING REQUIREMENTS

Standard ratings shall be established at the Standard Rating Conditions. All standard ratings shall be verified by tests conducted in accordance with the following standard:

**EN 328:** Forced convection unit air coolers for refrigeration - Test procedure for establishing the performances.

### 3. RATING REQUIREMENTS

According to EN 328 the following standard conditions are used:

Standard conditions for refrigerants	Air inlet temperature	Evaporating Temperature (°C)
SC1	+ 10	0
SC2	0	- 8
SC3	- 18	- 25
SC4	- 25	- 31

Standard conditions for liquids	Air inlet temperature (°C)	Liquid Temperature (°C)
SC6	+ 16	+ 4
SC7	0	- 10

Qualifying tests are conducted on one or two standard conditions based on the evaporating temperature range for which selection data are specified.

### 4. CERTIFIED CHARACTERISTICS

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A./s. LT917400020344823810  
AB „Sampo“ bankas



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The following characteristics of Air Coolers are certified :

- Standard capacity
- Fan power
- Air flow rate
- Surface area
- Liquid side pressure drop (only for liquids)

## 5. PRESENTATION OF DATA IN LITERATURE

### 5.1 Dry capacities and wet capacities

Standard capacities are measured at standard temperature conditions without condensation or frost formation on the cooler surface.

The participant is entitled to specify nominal capacities in his literature for practical (wet or frosted) conditions. In this case he is not obliged to specify the standard capacities in his literature.

The nominal capacities are related to the standard temperature conditions and must be calculated with the ratios in accordance with the following table.

This table also shows the relative humidity (RH) related to these ratios.

Conditions	RH (%)	Wet enhancement factor (Ratio Nominal capacity / Standard capacity)
SC1	85	1.35
SC2	85	1.15
SC3	95	1.05
SC4	95	1.01

For a certified range, the ratios and conditions related to the used test conditions shall be specified in all literature giving nominal capacities.

The participant is allowed to publish selection capacities for other temperature conditions and relative humidities as long as they are based on air inlet temperatures and related to the nominal capacities.

He shall make it clear that the selection capacities are not certified.

### 5.2 DT1

Nominal capacities should be based upon entering air temperature. The test conditions in the European standard are based on DT1 (DT1 = difference between the entering air temperature into the cooler and the temperature corresponding to the saturated refrigerant pressure at the outlet of the cooler).

Therefore it was decided that nominal capacities in leaflets, brochures, etc. should also be based on DT1.

This means a big change for the Industry as a significant number of manufacturers are still using Dtm to define nominal capacities (*Dtm = difference between the mean of entering and leaving air temperature into the cooler and the temperature corresponding to the saturated refrigerant pressure at the outlet of the cooler*).

Using the entering air temperature as reference temperature enables easier checking on the delivered capacity. With DT1 there is a direct relation between the tested capacity and the nominal capacity used in leaflets, brochures, etc.

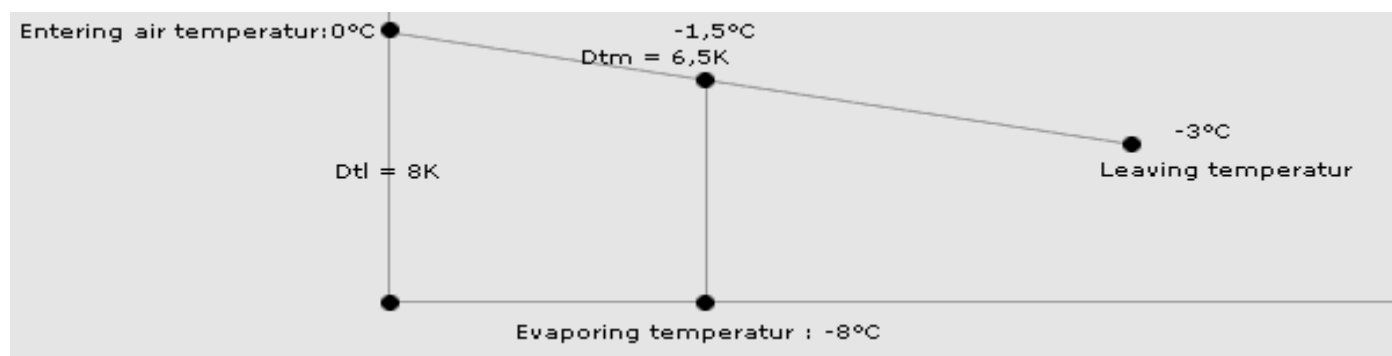
All participants within the certification programme will use DT1 which will create an uniform presentation of capacity.

**WARNING !** Do not compare capacity at DT1 = 8K with capacity at Dtm = 8K

**For example:**

An air cooler unit cooling air from 0°C to -3°C with an evaporating temperature of -8°C works at: DT1 = 8K, but Dtm = 6,5K.

The capacity for the same unit air cooler at Dtm = 8K will in figures be at least 25% higher. This is a matter of presentation because it is in fact the same air cooler.



## 6. SYMBOLS USED IN THE DIRECTORY

Pc nom	Nominal capacity (wet conditions)	kW
SC 1, 2, 3 or 4	Standard conditions	
Pe	Fan motor power input	W
MPS	Main Power Supply	