

## How to use the Correction factors proposed in the previous tables

### A) Mixture Water and Glycol---Evaporator leaving water temperature > 4°C

- depending from the type and percentage (%) of glycol filled in the circuit (see table 3.2 and 5)
- multiply the Cooling Capacity, the Compressor Power Input by the Correction factor of Table 5
- starting from this new value of Cooling Capacity, calculate the Flow Rate (l/s) and the Evaporator Pressure Drop (kPa)
- now multiply the new Flow Rate and the new Evaporator Pressure Drop by the Correction Factors of Table 5

#### Example

Unit size:

**EWLD110J-SS**

Mixture: Water  
Working condition: ELWT 12/7°C - Saturated discharge temperature 45°C  
- Cooling capacity: 110 kW  
- Power input: 30.9 kW  
- Flow Rate ( $\Delta t$  5°C): 5.24  
- Evaporator Pressure Drop: 14kPa

Mixture: Water+Ethylene glycol 30% (for a winter air temperature up to -15°C)  
Working condition: ELWT 12/7°C - Saturated discharge temperature 45°C  
- Cooling capacity:  $110 \times 0.972 = 107$  kW  
- Power input:  $30.9 \times 0.986 = 30.5$  kW  
- Flow Rate ( $\Delta t$  5°C):  $5.11$  l/s (referred to 107 kW)  $\times 1.074 = 5.49$  l/s  
- Evaporator Pressure Drop:  $15$  (referred to 5.49 l/s)  $\times 1.181 = 18$  kPa

### B) Mixture Water and Glycol---Evaporator leaving water temperature < 4°C

- depending from the type and percentage (%) of glycol filled in the circuit (see table 3.1 and 3.2 and table 5)
- depending from the evaporator leaving water temperature (see table 4)
- multiply the Cooling Capacity, the Compressor Power Input by the Correction factor of Table 4 and Table 5
- starting from this new value of Cooling Capacity, calculate the Flow Rate (l/s) and the Evaporator Pressure Drop (kPa)
- now multiply the new Flow Rate and the new Evaporator Pressure Drop by the Correction Factors of Table 5

#### Example

Unit size:

**EWLD110J-SS**

Mixture: Water  
Working condition: ELWT 12/7°C - Saturated discharge temperature 40°C  
- Cooling capacity: 115 kW  
- Power input: 28 kW  
- Flow Rate ( $\Delta t$  5°C): 5.49  
- Evaporator Pressure Drop: 15kPa

Mixture: Water+Ethylene glycol 30% (for a low evaporator leaving temperature of 0/-5°C)  
Working condition: ELWT 0/-5°C - Saturated discharge temperature 40°C  
- Cooling capacity:  $110 \times 0.641 \times 0.972 = 68.5$  kW  
- Power input:  $28 \times 0.880 \times 0.986 = 24.3$  kW  
- Flow Rate ( $\Delta t$  5°C):  $3.27$  l/s (referred to 68.5 kW)  $\times 1.074 = 3.51$  l/s  
- Evaporator Pressure Drop:  $7$  kPa (referred to 3.51 l/s)  $\times 1.181 = 9$  kPa