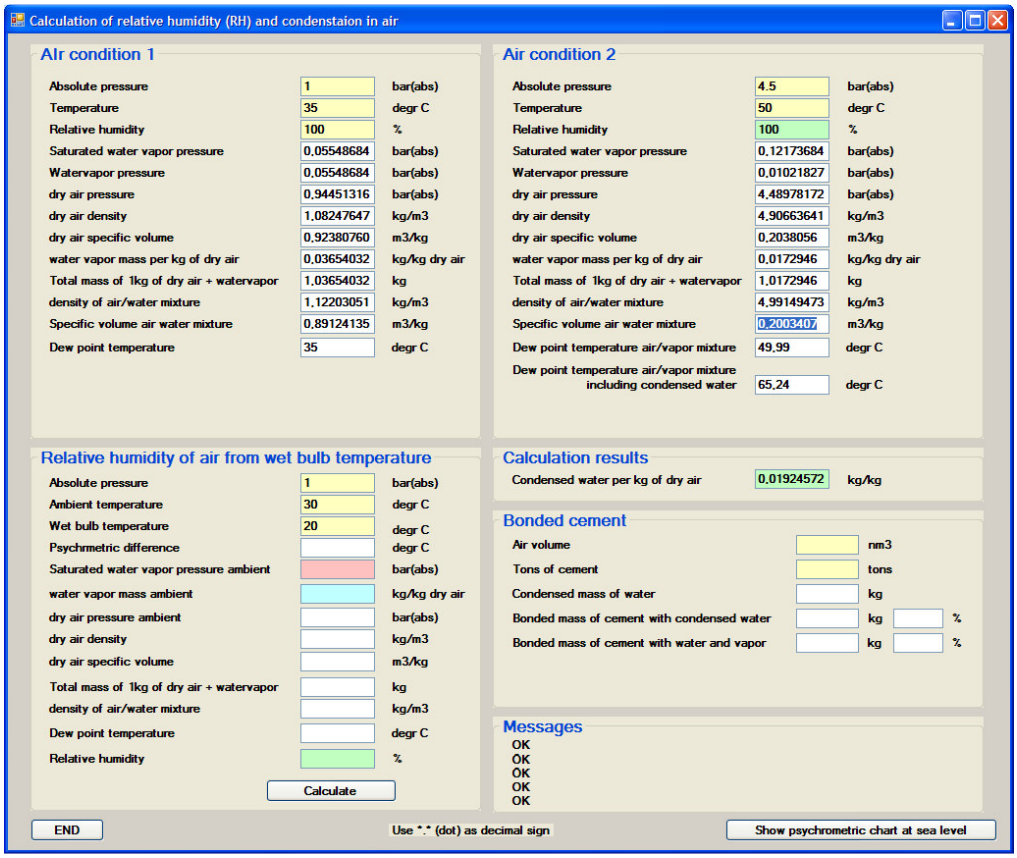
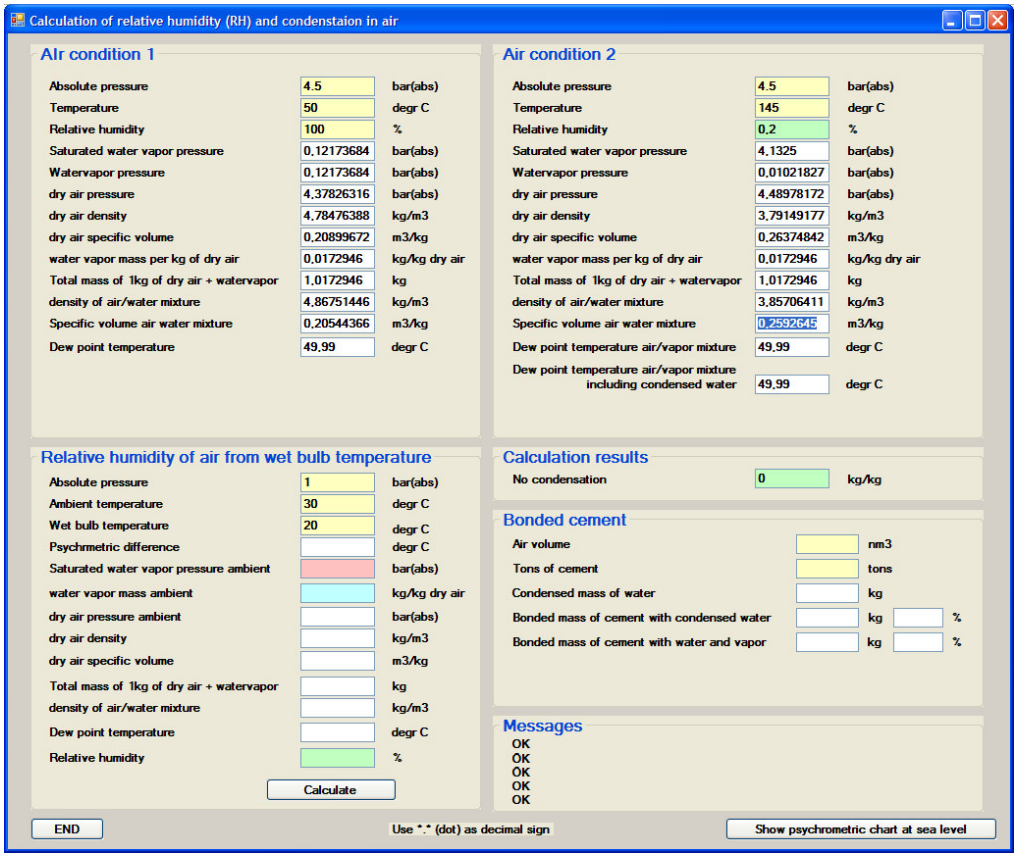

Calculation of relative humidity (RH) and condenstaion in air
Air condition 1
Absolute pressure 1 bar(abs)
Temperature 35 degr C
Relative humidity 100 %
Saturated water vapor pressure 0,05548684 bar(abs)
Watervapor pressure 0,05548684 bar(abs)
dry air pressure 0,94451316 bar(abs)
dry air density 1,08247647 kg/m3
dry air specific volume 0,92380760 m3/kg
water vapor mass per kg of dry air 0,03654032 kg/kg dry air
Total mass of 1kg of dry air + watervapor 1,03654032 kg
density of air/water mixture 1,12203051 kg/m3
Specific volume air water mixture 0,89124135 m3/kg
Dew point temperature 35 degr C
Air condition 2
Absolute pressure 4.5 bar(abs)
Temperature 50 degr C
Relative humidity 100 %
Saturated water vapor pressure 0,12173684 bar(abs)
Watervapor pressure 0,01021827 bar(abs)
dry air pressure 4,48978172 bar(abs)
dry air density 4,90663641 kg/m3
dry air specific volume 0,2038056 m3/kg
water vapor mass per kg of dry air 0,0172946 kg/kg dry air
Total mass of 1kg of dry air + watervapor 1,0172946 kg
density of air/water mixture 4,99149473 kg/m3
Specific volume air water mixture 0,2003407 m3/kg
Dew point temperature air/vapor mixture 49,99 degr C
Dew point temperature air/vapor mixture including condensed water 65,24 degr C
Relative humidity of air from wet bulb temperature
Absolute pressure 1 bar(abs)
Ambient temperature 30 degr C
Wet bulb temperature 20 degr C
Psychrmetric difference degr C
Saturated water vapor pressure ambient bar(abs)
water vapor mass ambient kg/kg dry air
dry air pressure ambient bar(abs)
dry air density kg/m3
dry air specific volume m3/kg
Total mass of 1kg of dry air + watervapor kg
density of air/water mixture kg/m3
Dew point temperature degr C
Relative humidity %
Calculate
Calculation results
Condensed water per kg of dry air 0,01924572 kg/kg
Bonded cement
Air volume nm3
Tons of cement tons
Condensed mass of water kg
Bonded mass of cement with condensed water kg %
Bonded mass of cement with water and vapor kg %
Messages
OK
OK
OK
OK
OK
END
Use "." (dot) as decimal sign
Show psychrometric chart at sea level


Calculation of relative humidity (RH) and condenstaion in air
Air condition 1
Absolute pressure 4.5 bar(abs)
Temperature 50 degr C
Relative humidity 100 %
Saturated water vapor pressure 0,12173684 bar(abs)
Watervapor pressure 0,12173684 bar(abs)
dry air pressure 4,37826316 bar(abs)
dry air density 4,78476388 kg/m3
dry air specific volume 0,20899672 m3/kg
water vapor mass per kg of dry air 0,0172946 kg/kg dry air
Total mass of 1kg of dry air + watervapor 1,0172946 kg
density of air/water mixture 4,86751446 kg/m3
Specific volume air water mixture 0,20544366 m3/kg
Dew point temperature 49,99 degr C
Air condition 2
Absolute pressure 4.5 bar(abs)
Temperature 145 degr C
Relative humidity 0,2 %
Saturated water vapor pressure 4,1325 bar(abs)
Watervapor pressure 0,01021827 bar(abs)
dry air pressure 4,48978172 bar(abs)
dry air density 3,79149177 kg/m3
dry air specific volume 0,26374842 m3/kg
water vapor mass per kg of dry air 0,0172946 kg/kg dry air
Total mass of 1kg of dry air + watervapor 1,0172946 kg
density of air/water mixture 3,85706411 kg/m3
Specific volume air water mixture 0,2592645 m3/kg
Dew point temperature air/vapor mixture 49,99 degr C
Dew point temperature air/vapor mixture including condensed water 49,99 degr C
Relative humidity of air from wet bulb temperature
Absolute pressure 1 bar(abs)
Ambient temperature 30 degr C
Wet bulb temperature 20 degr C
Psychrmetric difference degr C
Saturated water vapor pressure ambient bar(abs)
water vapor mass ambient kg/kg dry air
dry air pressure ambient bar(abs)
dry air density kg/m3
dry air specific volume m3/kg
Total mass of 1kg of dry air + watervapor kg
density of air/water mixture kg/m3
Dew point temperature degr C
Relative humidity %
Calculate
Calculation results
No condensation 0 kg/kg
Bonded cement
Air volume nm3
Tons of cement tons
Condensed mass of water kg
Bonded mass of cement with condensed water kg %
Bonded mass of cement with water and vapor kg %
Messages
OK
OK
OK
OK
OK
END
Use "." (dot) as decimal sign
Show psychrometric chart at sea level