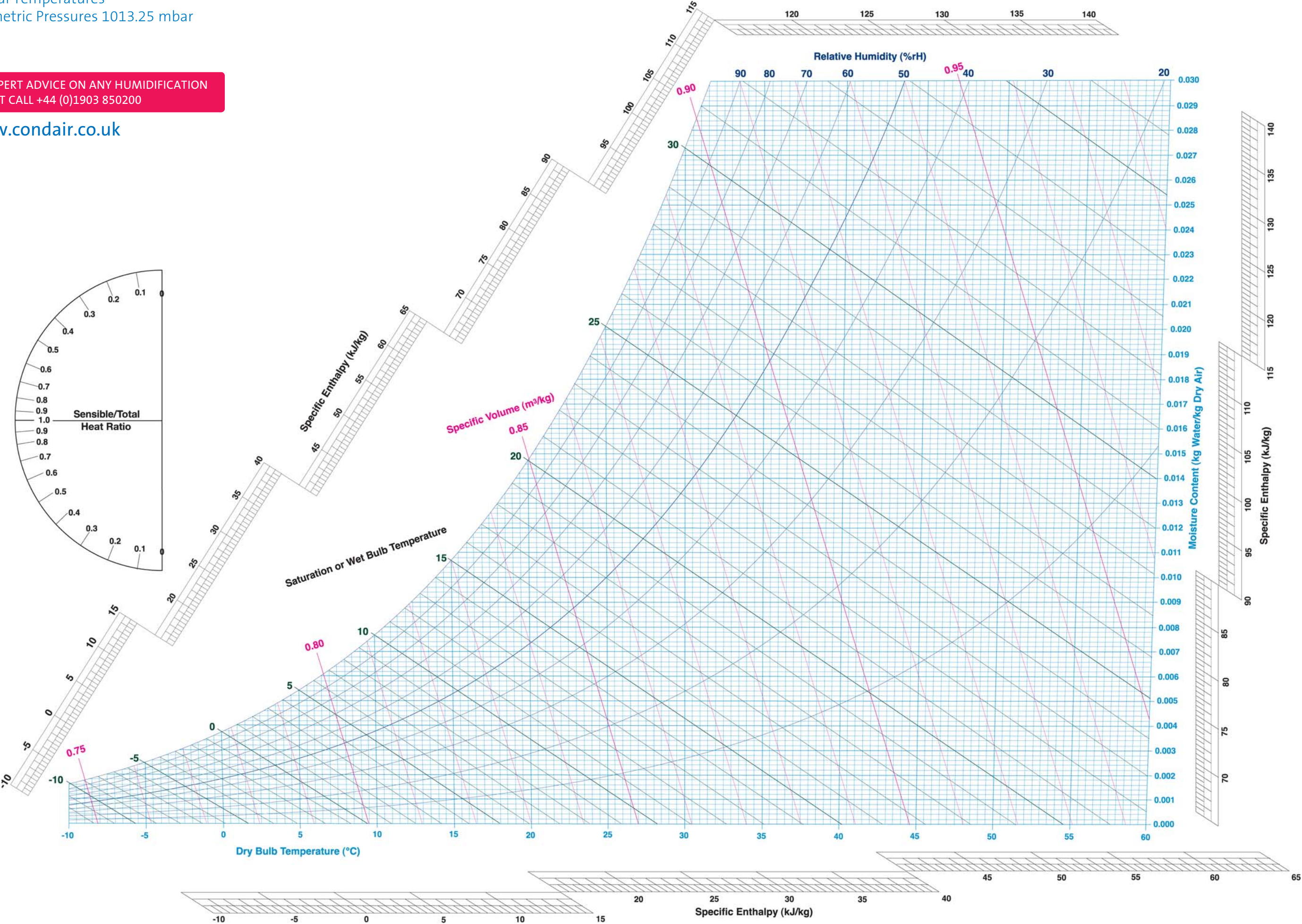


PSYCHROMETRIC CHART

Normal Temperatures
Barometric Pressures 1013.25 mbar

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IN-DUCT HUMIDIFIERS

DIRECT ROOM HUMIDIFIERS

PROCESS EXAMPLES

ISOTHERMAL



Condair RS
resistive steam



Condair EL
electrode boiler steam



Condair GS
gas-fired steam



Condair ESCO
live steam



Condair SE
steam-to-steam



Condair LS
live steam



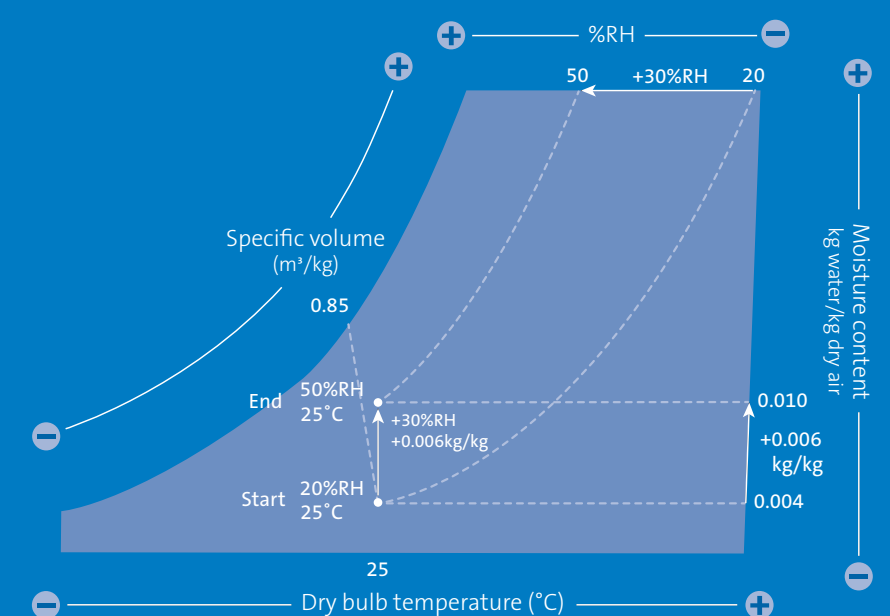
Condair RS with fan unit
resistive steam



Condair EL with fan unit
electrode boiler steam



Condair CP3 Mini
low capacity electrode boiler



ISOTHERMAL

ADIABATIC



Condair HP
high pressure spray



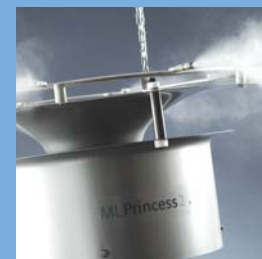
Condair ME
evaporative humidifier



JetSpray
compressed air & water spray



Condair DL
hybrid humidifier



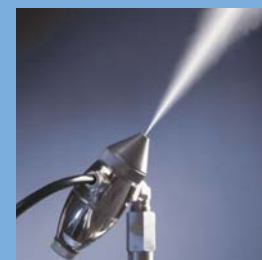
ML Princess
high pressure spray



ML Solo
high pressure spray



ML Flex
high pressure spray



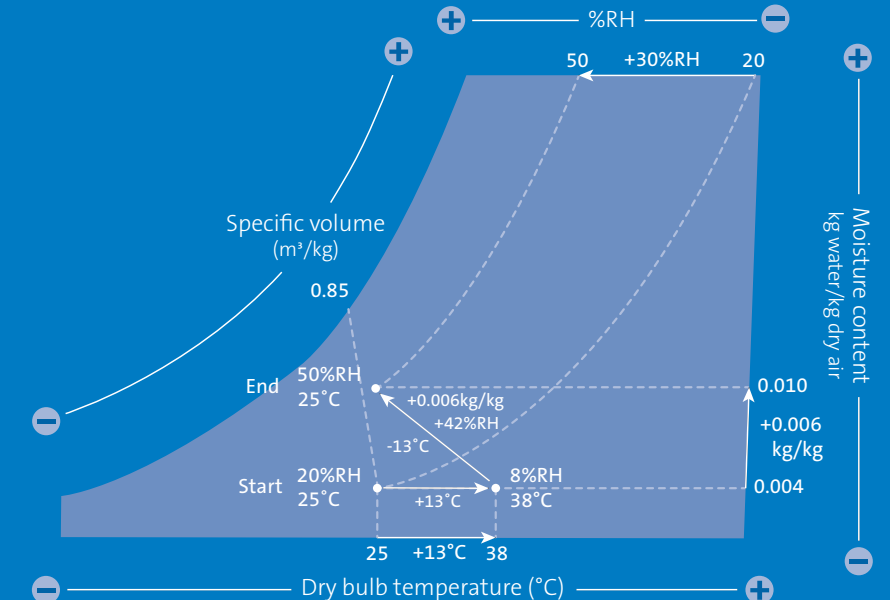
JetSpray
compressed air & water spray



Draabe NanoFog Evolution
high pressure spray



Defensor PH
mobile humidifiers



ADIABATIC

IN-DUCT LOAD CALC

The desired room condition is 50%RH at 25°C. An AHU supplies air at 3m³/s. 80% is re-circulated from the building itself and 20% is fresh air, which is pre-heated to 25°C (min 20%RH prior to humidifier).

The required humidifier duty is:

$$\frac{\text{Moisture x air vol x fresh air \%}}{\text{Specific volume}} = \text{humidity load}$$

$$\frac{0.006\text{kg/kg} \times 3\text{m}^3/\text{s} \times 3,600 \times 0.2}{0.85\text{m}^3/\text{kg}} = 15.25\text{kg/h}$$

DIRECT ROOM LOAD CALC

The desired room condition is 50%RH at 25°C in a production area of 3,600m³ with 2.5 air changes per hour and a current minimum humidity of 20%RH.

The required humidifier duty is:

$$\frac{\text{Moisture x air vol x no. of air changes}}{\text{Specific volume}} = \text{humidity load}$$

$$\frac{0.006\text{kg/kg} \times 3,600\text{m}^3 \times 2.5}{0.85\text{m}^3/\text{kg}} = 63.53\text{kg/h}$$

CALC EXAMPLES

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