Penmann
INNOVATIVE CLIMATIC SOLUTIONS FOR THE FOOD INDUSTRY

NR-DH71 Desiccant Dehumidifier

Product Overview

Desiccant rotor – located at the heart of the machine the washable rotor is designed to absorb moisture without the need for a refrigeration circuit

Robust construction – complete with stainless steel chassis, panels & crash frame

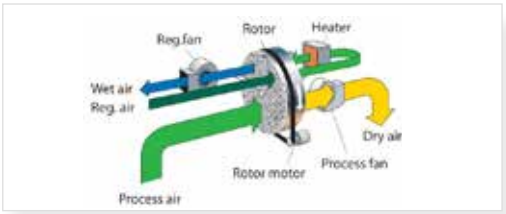
Digital controller – possible for the user to set a desired set point using the integrated controller in conjunction with humidistat

Integrated heat recovery – provides pre-heat for the 'regeneration' section to reduce energy consumption – operation is fully managed by the unit's controller

Filtration section – can be easily accessed for cleaning & replacement of dirty filters when necessary

Operating Principles

There are two air streams of differing flow rates – typically having a ratio of approximately 3:1. The greater 'process' flow is dried as it passes through the dehumidifier – while the smaller 'regeneration' flow is used to heat the rotor material to drive the absorbed moisture vapour from the desiccant. The moisture removed from the process air is transferred as the rotor slowly turns.



Performance Data

Nominal Extraction Capacity (1)	13 kg/hr
Nominal 'Dry' Air Flow Rate	2,500 m³/hr
Maximum 'Dry' AirExternal Static Pressure	400 Pa
Nominal 'Wet' Air Flow Rate	800 m³/hr
Maximum 'Wet' Air external Static Pressure	300 Pa

Operating Limits

Maximum Inlet Air Temparature	40 °C
Minimum/Maximum Ambient Temperatures	-20/50 °C

Electrical Data

Power Supply	400/3/50 V/ph/Hz
Power Connection	32 A 5 Pin Plug

Spigot Connections

'Process' Air Inlet	395 x 310 mm (w x h)
'Regeneration' Air Inlet	225 x 210 mm (w x h)
'Dry' Air Outlet	300 mm Ø
'Wet' Air Outlet	200 mm Ø

Filtration - Process / Regeneration Circuits

Grade	G4+F7

Heater - Regeneratiobn Circuit

Heating Capacity	12.5 / 17.0 kW
Control Steps	2

Physical Data

Length (2)	1,450 mm
Width (2)	1,000 mm
Height (2)	1,590 mm
Operating Weight (2)	230 kg

(1) Performance data based on 'process' inlet air conditions of +20°C / 60% R.H.

(2) Dimensions / weights include crash frame

Still have a question?

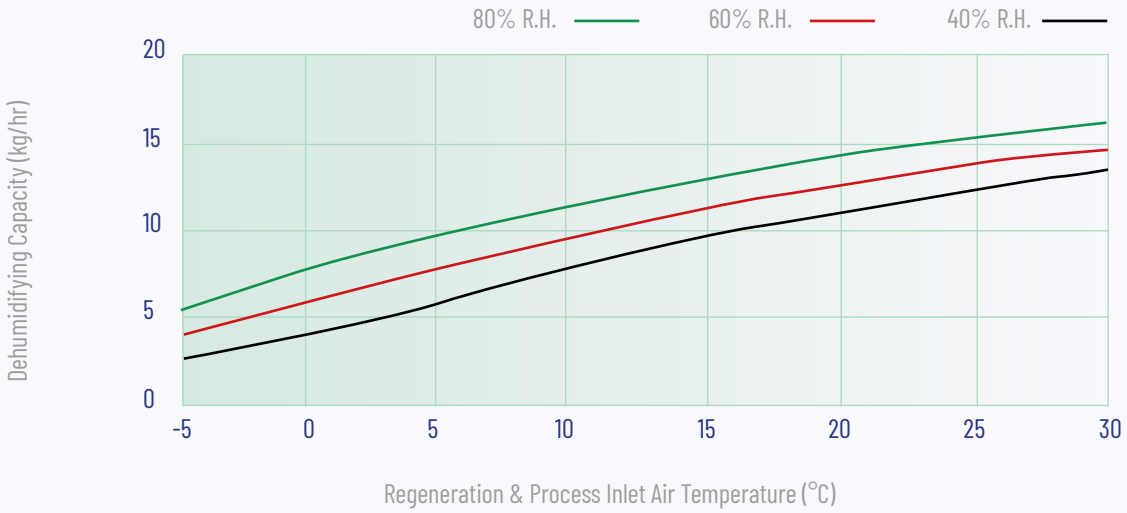
Get in touch with one of our expert team today.

0113 202 7300
info@penmann.co.uk
www.penmann.co.uk

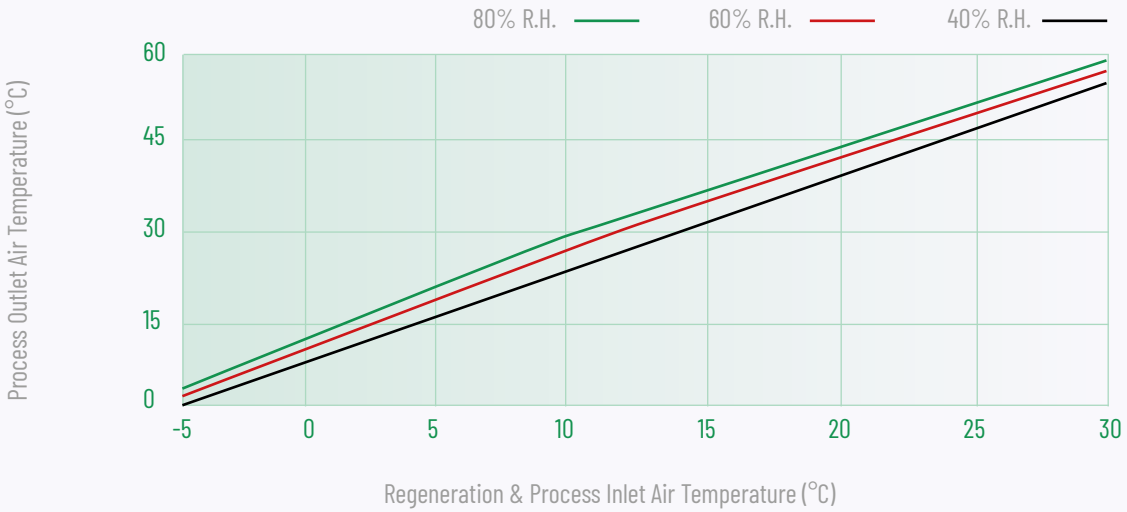
Penmann
INNOVATIVE CLIMATIC SOLUTIONS FOR THE FOOD INDUSTRY

NR-DH31 Desiccant Dehumidifier

Dehumidifying Capacity



Process Outlet Air Temperature



The level of performance provided by each machine depends on the conditions at which it is operating.
The factors determining performance are the temperature & relative humidity (R.H.) of the inlet air.
The above graph illustrates the dehumidifying capacity – at three different R.H. levels – based on differing inlet air temperatures.