



NORDAIRNICHE

Swimming Pool Series

Warm Air Systems For Swimming Pool Hall Heating

AMBIRAD
HEATING AND VENTILATION SOLUTIONS





Swimming Pool Series

Warm Air Systems For Swimming Pool Hall

Designs take into account the total wetted area and apply 'Best Practice' ventilation rates to maintain the correct temperature and humidity levels.

The Nordair Niche range of high efficiency heaters provide an economical solution with low running and maintenance costs.

The following should be considered when designing pool hall environments

- > Comfort of the bathers, operatives and spectators
- > Protection of the building fabric
- > Energy efficiency

The Nordair Niche comprehensive range of equipment will achieve this.

Nordair Niche swimming pool units are complete packaged units with the option of heat recovery.

There is a choice of a high efficiency Direct burner system, Indirect fired burner heating coils, both provide optimum efficiency and reliability, an additional option will include LPHW heating coil.

Features

- > Direct fired system with 100% net thermal efficiency with a full 20:1 turndown
- > Indirect Fired system with 91% optional staged or fully modulating burner control
- > LPHW version available
- > Precise temperature control
- > Airflows start from 0.57m³/s
- > Fully packaged units
- > Fully weatherproofed units for external locations (optional)
- > Synthetic Filtration graded G4
- > Variable air volume supply and extract fan sets for optimum control and efficiency
- > High humidity override control
- > Flexible design layouts
- > Tailored equipment to meet budget and component requirements.
- > Internally treated components to protect against chlorinated atmospheres.

Operation

The VAV fans are controlled by a combination of temperature and humidity sensing. As the space temperature approaches the set point the fan speed of both the supply and extract fans will decrease to reduce the air change rate and save energy.

If the space humidity increases towards its set point both the supply and exhaust fan speed will increase to ensure condensation does not occur.

Should the humidity be low but the temperature is also low then both fans will increase to maintain the correct temperature level.

The supply and exhaust fans are continually optimised to meet the space comfort levels.

For building and contents protection out of hours a humidity override prioritises the fan then the burner to maintain controlled low humidity levels and save energy.

Benefits

- > Simple installation
- > Dry warm and comfortable environments
- > Limited ductwork installation required
- > Simple user friendly controls
- > Low running cost's
- > Condensation protection
- > Reduction of algae
- > Bacteria protection

Controls

Environmental control for swimming pools can account for up to 80% of the energy usage.

To protect the building fabric and maintain a constant and comfortable pool hall environment it is essential that the temperature and humidity are closely controlled.

To minimise energy consumption it is desirable to recover the heat from the exhaust ventilation and return it to the supply air ventilation as the prime source of heat.

During the unoccupied mode there is little or no need to introduce fresh air, in periods of low occupancy and/or during winter months when the moisture content of the air is low, it is possible to maintain indoor air quality with reduced ventilation rates.

During maximum occupancy periods when there is high moisture pool hall humidity the ventilation rate will automatically increase up to maximum replacing high moisture laden air with drier fresh air.

Nordair Niche units constantly control the pool environment by integrating accurate humidity and temperature controls with variable technology.

Ease of Maintenance

A well design compact layout with quality components ensures minimal maintenance is required to the Nordair Niche swimming pool hall heaters

We would advise that service work should be carried out twice annually. Access to internal components is provided by means of insulated hinged panels with tamperproof locks.

Filters are accessed from side panels which will need to be changed periodically

All access panels are located on one side of the unit thus simplifying maintenance to the components.



Specification

All units are of fully insulated weatherproofed construction suitable for external installation and comprise the following options;

- > Supply and extract section complete with G4 filtration
- > Direct fired, Indirect fired or LPHW heating options
- > BMS integration optional

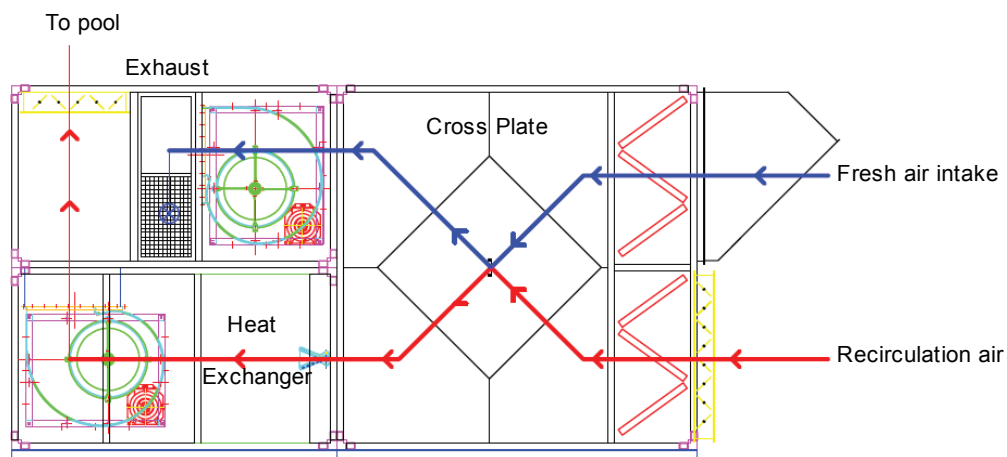
- > High efficiency forward or backward curved fan to meet the system resistance.
- > The units are split into two ranges XPL and XP.
- > XPL units incorporate a mixed flow direct drive both on the supply and extract. The low noise discharge and compactness of this range is suitable for smaller pools (limited external pressure available)

- > XP units utilise backward curve fan technology and continues our range to accommodate the largest swimming pools whilst operating at high external static pressures.
- > All units are fitted with fully automatic integral controls and safety devices.
- > Double cross plate heat exchangers available for higher efficiencies.
- > Bespoke configurations available.

Swimming pool units - VAV XP

Note: VAV XP - Variable air volume units with inverter drive supply, exhaust fans, x plate heat recovery

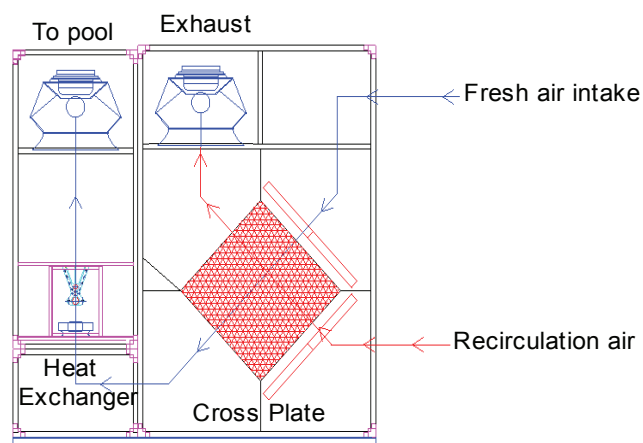
Technical Data							
Model		DF3VAV150	DF4VAV220	DF5VAV300	DF7VAV375	DF9VAV450	DF11VAV500
Maximum heat output	kW	132	198	264	330	396	462
Gas Consumption¹							
Natural Gas G20	m ³ /h	14.0	21.0	28.0	35.0	42.0	50.0
Gas connection		¾"	1"	1¼"	1½"	1½"	1½"
Maximum Airflow	m ³ /s	2.82	4.00	5.13	6.59	8.00	9.42
Maximum motor rate	kW	5.5 X 2	7.5 X 2	11.0 X 2	11.0 X 2	15.0 X 2	18.5 X 2



Low Sound Discharge Swimming Pool Units - VAV XP L

Note: VAV XP L - variable air volume units with inverter drive supply, exhaust fans, x plate heat recovery and low sound discharge

Technical Data				
Model		DF1VAV30	DF2VAV50	DF3VAV100
Maximum heat output	kW	26	53	92
Gas Consumption¹				
Natural Gas G20	m ³ /h	3.0	6.0	10.0
Gas connection		½"	½"	¾"
Maximum Airflow	m ³ /s	0.86	1.13	2.00
Maximum motor rate	kW	2.2 X 2	3.0 X 2	4.0 X 2



Document reference number: GB/NOR/088/0314

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