



DF Series

GAS FIRED MAKE-UP AIR FOR SWIMMING POOLS



 **NORDAIR**
NICHE COMBINED
HEATING AND
VENTILATION

DF Series

GAS FIRED MAKE-UP FOR SWIMMING POOLS

Introduction

The Nordair Niche DF range provides an economical solution with low running costs and low ongoing maintenance costs.

When considering a pool hall environment we need to consider the following:

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

All of which the comprehensive range of units achieves.

Nordair Niche swimming pool units are complete packaged units incorporating cross-plate heat recovery, supply heated air extract and filters.



Features

- Up to 60% heat recovery gained with use of cross-plate heat recovery
- Airflows from 0.57m³/s to 9.45m³/s
- Fully packaged units require only gas and electrical connections
- Units fully weatherproofed for outdoor installation (optional)
- Synthetic grade F4 filtration
- Net thermal efficiency of 100%
- Burner turndown ratio up to 20:1
- Precise temperature control
- Variable air volume supply and extract fan sets
- Flexible layout designs
- Single phase units (3 phase optional)

Benefits

- Simple installation
- High efficiency
- Dry warm and comfortable environments
- Limited ductwork installation needed
- Simple "user friendly" controls
- Reduced running costs
- CE approved units
- Condensation protection
- Reduction of algae
- Bacteria protection

Variable Air Volume

The VAV variable air volume units incorporate an inverter drive and a high efficiency Nordair Niche box burner with integral combustion air fans to maintain optimum performance as the air flow varies.

The delivery of primary air is varied according to the humidity levels within the space. This further reduces running costs and ensures a constantly dry and well ventilated atmosphere that is comfortable for bathers, spectators, operatives and ultimately protects the building structure.



Specification

Nordair Niche swimming pool units are designed to be installed to provide tempered and filtered fresh air make-up into swimming halls.

The units are of fully insulated weatherproof construction suitable for external installation and comprise the following options :

- Aluminium frame insulated infill panels
- Supply and extract filter section with disposable F6 filters
- 100% efficiency direct gas fired burner, complete with integral combustion air fans
- Burner turndown of up to 20:1
- Forward curved centrifugal fan
- Standard units provide a maximum of 250Pa ESP, for higher static pressures consult Nordair Niche box burner

The units are split into two distinct ranges, the XPL and XP.

XPL units incorporate a mixed flow direct drive fan both on supply and extract. The low noise discharge and compactness of this range provides an overall compact unit for smaller pools. (limited external pressures available)

XP units utilise backward curved fan technology and continues our range to accommodate the largest swimming pools whilst ensuring it works at the highest of external pressures.

The units are suitable for a 3 phase electrical supply and are fitted with fully automatic integral controls and safety devices.

Ease of Maintenance

The amount of maintenance to be carried out is minimal. Generally we would advise that a pool unit should be serviced twice a year and as such access to all internal components is provided by means of insulated hinged panels with tamperproof locks.

Filters are removable from the side and will need to be changed periodically.

All access panels are on one side of the unit thus increasing accessibility to the components and ease of design and installation and safety devices.

Certification

The units are CE approved to EN525



Controls

Environmental control for swimming pools can account for 80% of the energy used in swimming pool applications.

To protect the building fabric and maintain a comfortable environment for occupants, it is essential that the temperature of the air within the pool hall is closely controlled.

To minimise running costs it is desirable to recover the heat which is normally wasted in exhaust ventilation and return it to the incoming fresh air input ventilation.

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

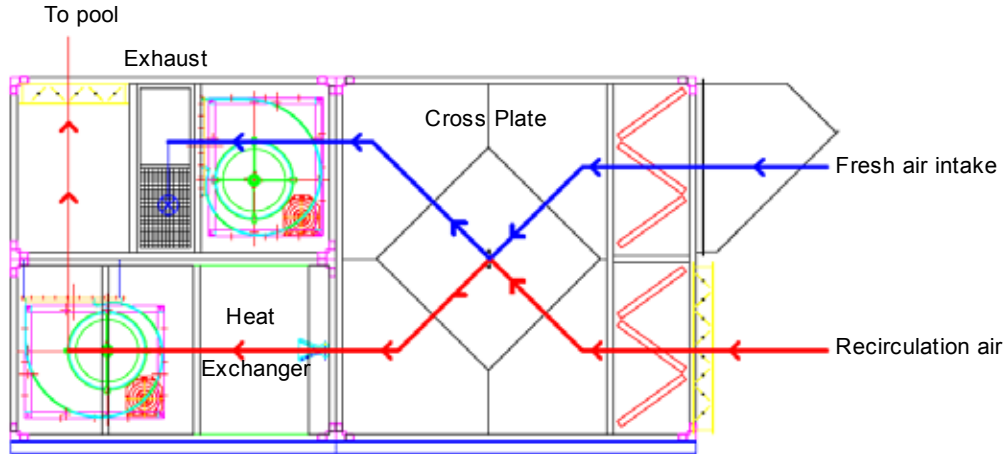
During maximum occupancy periods when there is high ambient moisture content the ventilation rate can be increased up to the maximum, replacing moisture laden pool air with drier fresh air,

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

Swimming pool units - VAV XP

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

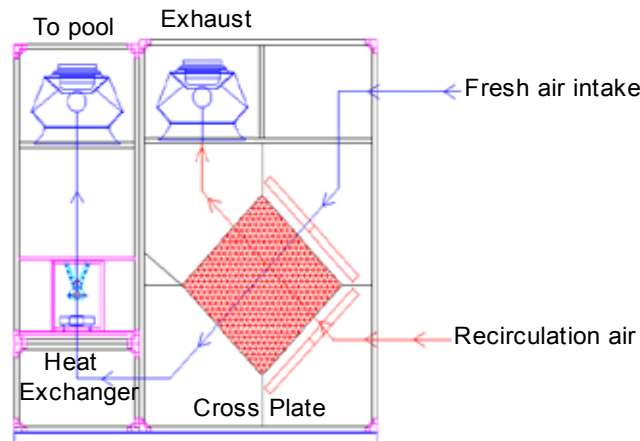
TECHNICAL DATA		DF3VAV150	DF4VAV220	DF5VAV300	DF7VAV375	DF9VAV450	DF11VAV500
Model							
Maximum heat output	kW	132	198	264	330	396	462
Gas Consumption¹							
Natural Gas G20	m ³ /h	14.0	21.0	28.0	35.0	42.0	50.0
Gas connection		¾"	1"	1¼"	1½"	1½"	1½"
Maximum Airflow	m ³ /s	2.82	4.00	5.13	6.59	8.00	9.42
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		DF1VAV30	DF2VAV50	DF3VAV100
Model				
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



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Northern Office
 Bean Leach Road
 Hazel Grove Stockport Cheshire
 SK7 4LD
 United Kingdom

Southern Office
 Unit 4 Chilford Court
 Braintree Essex
 CM7 2QS
 United Kingdom



Telephone: 0161 482 7900
 Facsimile: 0161 482 7901
 Email: sales@nordairniche.co.uk

Telephone: 01376 332200
 Facsimile: 01376 332201
 Website: www.nordairniche.co.uk



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