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[] AIR CONDITIONING & HEATING

MULTI-DENCO F-Version

MULTI-DENCO® F-Version

>> DATA CENTRE COOLING



MULTI-DENCO®

Introducing the F-Version



CONSTANTLY EVOLVING...

The *Multi-DENCO*® A-Version revolutionised the efficiency levels that a refrigeration-based system could achieve. Now, the *Multi-DENCO*® F-Version has evolved to include a FreeCool circuit, which can be utilised every day of the year. This allows for the direct expansion circuit to be reserved until it is essential and this is all designed within the familiar shape and size of a *Multi-DENCO*®.



£3 Million of research and development produced the *Multi-DENCO*® range with direct expansion and chilled water designs that are best in class. For our customers' rapidly developing environment and constant move towards sustainability, *Multi-DENCO*® has evolved to the F-Version.

The combination of a mechanical and a FreeCool system creates opportunities for precision cooling with minimal energy requirements, whilst guaranteed resilience with the direct expansion circuit that is able to provide 100% of the cooling requirements.

For example, a size 045 unit installed in an ambient environment similar to London, could provide partial FreeCooling up to 99% of the year. This can reduce the compressor operating hours by 53%, saving energy and reducing compressor wear. If these units are used in part load conditions, the savings increase further!




Designed for your potential




The F-Version is designed to maximise your savings by incorporating an EC water pump and EC outdoor fans, along with an integrated buffer vessel. Only an additional strainer is required.

The control strategy is designed to use the FreeCool circuit for as long as possible to minimise the amount of mechanical cooling required. The FreeCool circuit can provide 100% cooling, in suitable conditions, and partial cooling up to 5K below your temperature set point. If ever required, the direct expansion circuit can supply some or all of the cooling, but the FreeCool circuit will continue as long as the outdoor temperature is below an ambient set point. This could mean free cooling every day of the year!

Your heat rejection can also be achieved through a condenser (DMOUCD) and a dry-cooler (DMOUDW). If outdoor space is limited we can offer a hybrid design (DMOUHM) combining both units into a single compact design.



<i>Indoor Unit</i>				
Units		DMF030	DMF045	DMF065
				
Dimension (H × W × D)	mm	1,940 × 1,180 × 780	1,940 × 1,670 × 780	1,972 × 1,992 × 780
Air Volume Flow	m ³ /h	7,800	11,710	16,900
External Static Pressure	Pa	50	50	50
Fan Power Input	kW	1.4	2.1	3.4
Sensible Cooling – DX Max ¹	kW	36.1	52.5	73.6
Compressor Power Input ²	kW	9.3	13.2	18.6
Sensible Cooling – FC Only ³	kW	24.4	36.5	53.1
FC Power Input	kW	0.9	1.6	2.7
FreeCool Flow Rate	l/s	1.00	1.75	2.50
Pump External Head (Max) ⁴	kPa	103	89	67
Recommend Pipe Size - FC	mm	35	42	54
Interconnecting FC Pipework	m	60	60	60

<i>Outdoor Unit (Hybrid Design)</i>				
Units		DMOUHM032E	DMOUHM050E	DMOUHM050E
				
Dimension (H × W × D)	mm	1,700 × 1,350 × 1,200	1,700 × 2,210 × 1,200	1,700 × 2,850 × 1,200
Air Volume Flow (Max)	m ³ /h	12,400	23,900	34,900

For a personalised report of how much the F-Version could save you – please contact your nearest office at:
www.flaktgroup.com/en/contact-us

¹ Direct Expansion: RAT 30°C / 30% RH / 45°C condensing temperature. Represents maximum capacity at conditions. ² Values based on maximum conditions in note 1. Inverter compressor have increasing efficiency in partial load.
³ FreeCool: RAT 30°C / 30% RH / ΔT 9°C / 100% Water. ⁴ Based on recommend pipe size and flow rate stated.
FreeCool conditions dependent upon ambient conditions and indoor requirements. Values shown are only for example and can vary on application. Speak to your local sales office for a personalised calculation.

EXCELLENCE IN SOLUTIONS

WWW.FLAKTGROUP.COM

MULTI-DENCO F-VERSION

FläktGroup is the European market leader for smart and energy efficient Indoor Air and Critical Air solutions to support every application area. We offer our customers innovative technologies, high quality and outstanding performance supported by more than a century of accumulated industry experience. The widest product range in the market, and strong market presence in 65 countries worldwide, guarantee that we are always by your side, ready to deliver Excellence in Solutions.

PRODUCT FUNCTIONS BY FLÄKTGROUP

Air Treatment | Air Movement | Air Diffusion | Air Distribution
Air Filtration | Air Management | Air Conditioning & Heating
Controls | Service

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