

## Installation & Operating Manual

# DS-3 De-stratification Fan

(DS3-3, DS4-3, DS6-3, DS10-3)

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### Warnings

Nortek Global HVAC equipment must be installed and maintained in accordance with the requirements of the Codes of Practice or rules in force.

All external wiring must comply with the codes of practice or rules in force in the country of installation. Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death.



# 1. Technical information

		DS3-3	DS4-3	DS6-3	DS10-3
Mounting Height	m	4 - 8	6 - 12	10 - 18	10 - 18
Approx Mounting Centres <sup>1</sup>	m	13 - 16	15 - 20	16 - 21	17 - 23
Air Volume	m <sup>3</sup> /h	3000	5300	6600	9000
	c.f.m	1765	3199	3885	5297
Maximum Throw	m	8	12	18	18
Velocity	m/s	3.77	4.72	6.53	5.73
Electrical Supply		230V 50Hz 1Pha			
Motor Size	W	108	250	380	520
Operating Current	A	0.52	1.15	1.75	2.40
Starting Current	A	1.5	2.4	6.0	6.7
Fuse Rating	A	6	6	6	10
Thermostatic Control		Included			
Net Weight	kg	15	19	21	27
Sound Pressure Level <sup>2</sup>	Lp db (A)	44	54	57	59

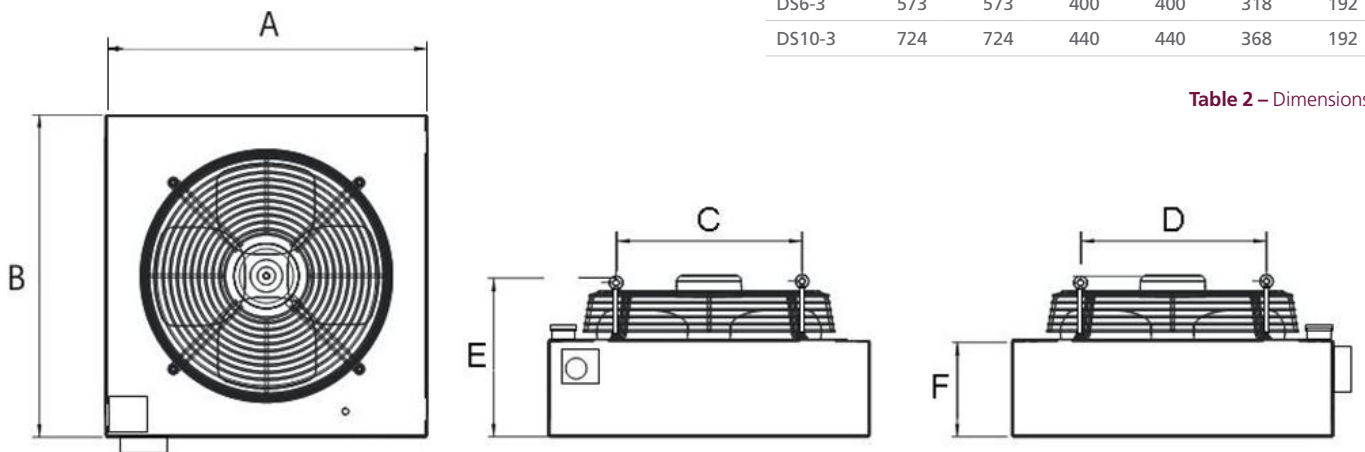
**Notes:** Mounting centres based on mounting height. (i.e. the lower the unit, the further they are apart.) <sup>2</sup> Sound level r=5m, Q=1, A=160m<sup>2</sup>

**Table 1 – Technical information**

# 2. Dimensions

Model	A	B	C	D	E	F
DS3-3	474	474	332	332	318	192
DS4-3	573	573	365	365	357	192
DS6-3	573	573	400	400	318	192
DS10-3	724	724	440	440	368	192

**Table 2 – Dimensions**



**Figure 1. Dimensions**

# 3. General information

Reznor de-stratification fans are a self contained unit incorporating adjustable four way louvre discharge, a high efficiency axial fan and an integral pre-wired thermostat mounted on the side of the unit.

Care should be taken to ensure that the unit is not sited in areas where it would be undesirable to recirculate high level air because of fumes, etc., or where corrosive atmospheres may attack the fan unit.

To obtain maximum benefit, destratification fans should be sited in the higher part of the building, close to the apex, approximately one metre below the peak.

Fans located over heat generating machinery or lighting maximise the benefits of 'free heat' whilst fans positioned close to doorways help to quickly restore comfortable conditions after door operation.

Fans should not be sited adjacent to large expanses of wall or roof glazing, or in close proximity to open flued heater units, as the airflow could adversely affect flue performance.

The de-stratification fan is equipped with four eyebolt suspension points, one on each corner, and may be suspended from these using chains or wires.

Each de-stratification fan is equipped with a cable gland mains input positioned on the terminal box on top of the main fan. Each unit will require a 230V 50Hz 1ph fused supply to operate.

For safety and maintenance purposes, each fan should be fitted with an isolator located adjacent to the unit.

Any reference made to Laws, Standards, Directives, Codes of Practice or other recommendations governing the application and installation of heating appliances and which may be referred to in Brochures, Specifications, Quotations, and Installation, Operation and Maintenance manuals is done so for information and guidance purposes only and should only be considered valid at the time of the publication.

The Manufacturer cannot be held responsible from any matters arising from the revision to or introduction of new Laws, Standards, Directives, Codes of Practice or other recommendations.

The information contained in this technical bulletin is designed to aid a qualified or competent service technician in the instruction it is intended for.

**Tools required**

The following tools and equipment will be required to complete this task:

1. Lengths of chain or suspension wire, accessories, and relevant tools.
2. Length of 3 core 1.0mm<sup>2</sup> cable.
3. Wire strippers/cutters.
4. Electrical screwdriver.
5. Multi-meter.

**Caution: Heavy Item**

The destratification fan is equipped with four suspension points, one on each corner. These take the form of an eyebolt.

Using either chain or wire rope, connect each point to a rigid construction i.e. Unistrut, girders etc.

**Note:** Ensure the framework is adequate to take the weight of the particular destratification unit. Once the destratification fan is in position, the wiring can commence.

The destratification fan is despatched in a cardboard box. Remove component from box.

Adjust all outlet louvres to achieve desired air distribution and ensure blades are not resonating.

Turn the power/spur on. The destratification fan will now operate and automatically switch off when the set temperature has been reached.

To check operation of the DS type unit, rotate room stat dial to min setting - fan should operate. Rotate room stat dial to max setting - the fan should turn off. Finally turn the room stat to approximately 2° to 3° above the desired room temperature. If the fan does not operate in this order, check wiring details in fig.2. The unit is now ready for operation.



Figure 2. Thermostat

**4. Wiring details**

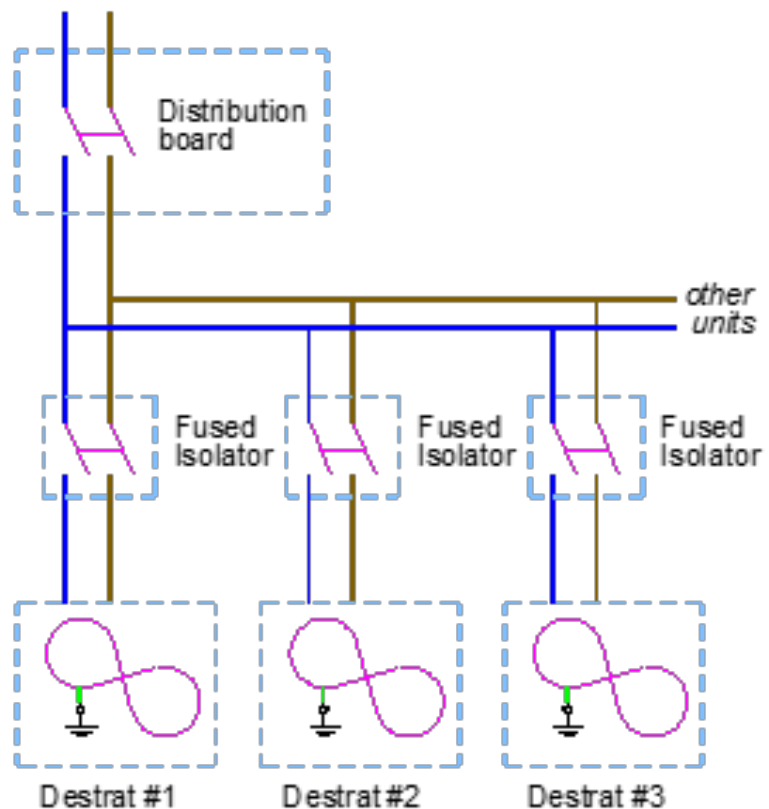


Figure 3. Typical schematic wiring destrat fans

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**AFFIX AGENTS DETAILS HERE**



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