

PRODUCT BROCHURE

**SMARTEMP**<sup>®</sup>  
IN COMFORT



Drum Displacement Diffuser

**DDF-FD**

## DESCRIPTION

The SMARTEMP® Drum Displacement Diffuser, type DDF-FD (figure 1), produces a low velocity radial airflow pattern from a perforated cylindrical discharge face made of powder coated galvanised steel. Air oozes out of the perforated face with minimal mixing, to produce a low velocity, low level lake of high quality supply air that floods the floor with displacement airflow.

A low level occupancy microclimate of enhanced indoor air quality is created, in which convective currents from heat sources in the occupancy zone, such as occupants, equipment and lights rise upwards, drawing in high quality replenishment air from the occupancy microclimate, to envelope the heat sources in cooler, high quality air. Heat and contaminants stratify at a high level in concentrated form, where they are removed from the space (figure 2).

Due to stratification of heat, relatively large supply-to-return temperature differentials are achievable – dependent on ceiling height – despite the relatively high supply air temperature (typically 20°C), thereby minimising fan energy.

Energy savings also accrue from the extended free cooling range typically achieved by the elevated supply air temperature, as well as from the potential to reduce outdoor airflow rates due to the enhanced indoor air quality resulting from the improved ventilation effectiveness of the low level displacement supply.



Figure 1

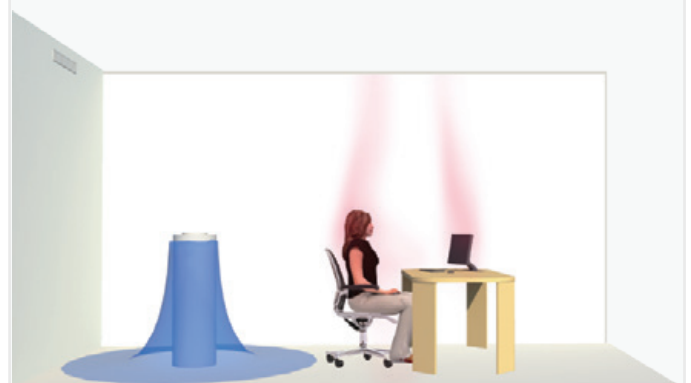
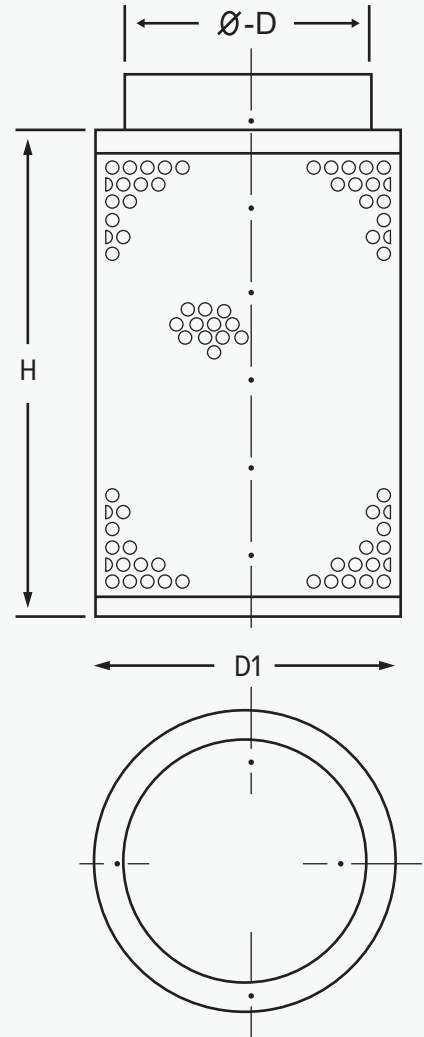
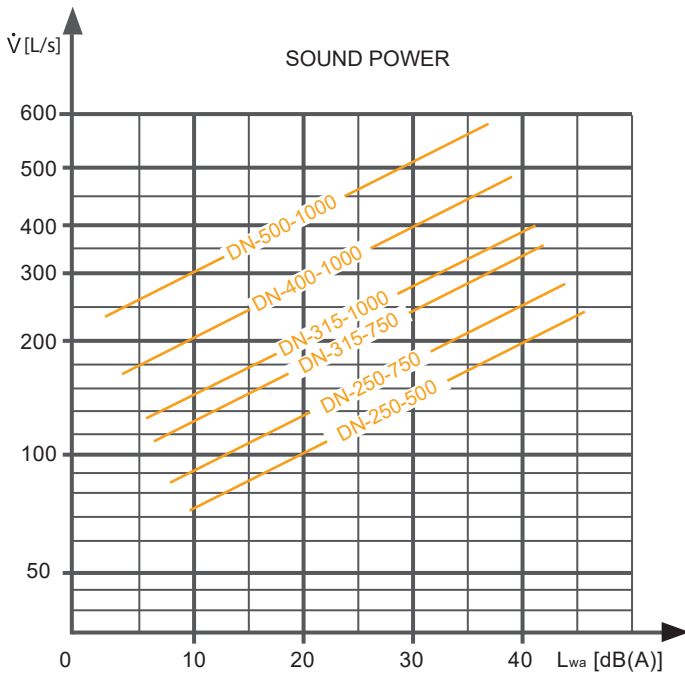
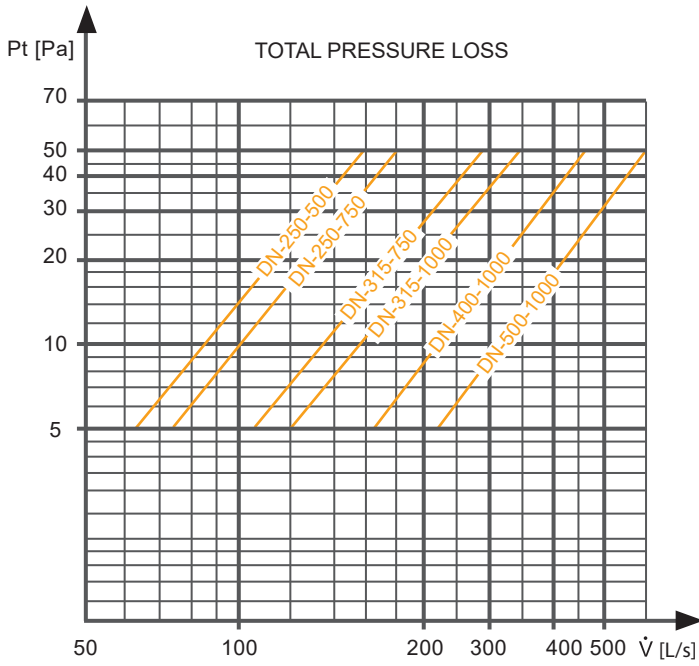


Figure 2

# TECHNICAL DATA



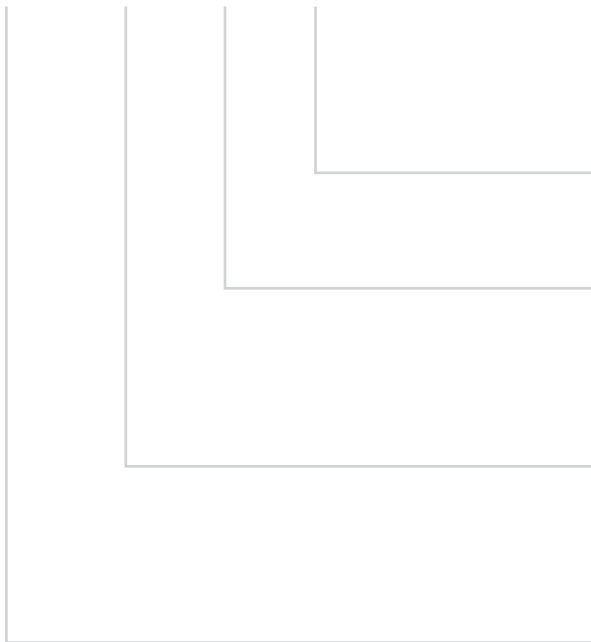
DN	D	D1	H	H2
250	249	315	500 to 750	100
315	314	400	750 to 1000	100
400	399	500	1000	100
500	499	630	1000	100

All dimensions in mm.

*Products supplied may differ slightly from those described in this technical brochure due to on-going product development.*

# ORDER DETAILS

DDF-FD-\_\_\_\_-\_\_\_\_-\_\_\_\_



COLOUR:  
- RAL \_\_\_\_\_

HEIGHT:  
- \_\_\_\_\_

NOMINAL DIAMETER:  
- DN250  
- DN315  
- DN400  
- DN500

MODEL:  
- Drum Displacement Floor - Fixed Direction

**Note:**  
Products supplied may differ slightly from those described in this technical brochure due to on-going product development.



For additional information, please contact [info@smartemp.com](mailto:info@smartemp.com)

We strive to continually improve SMARTEMP products. Brochures and marketing material are subject to change without notice, and may not reflect the most recent product variants. Please contact us or consult your SMARTEMP sales representative for current specifications or more detailed information. Not all products may be available in all geographic regions.

Applicable Patents and Trade Marks can be viewed at [smartemp.com/patents](http://smartemp.com/patents)

Not to be reproduced, wholly or in part, without the written permission of SMARTAIR DIFFUSION Pty. Ltd.

® SMARTEMP is a registered trade mark. © 2019.