2/S10
v 2.4 (en)

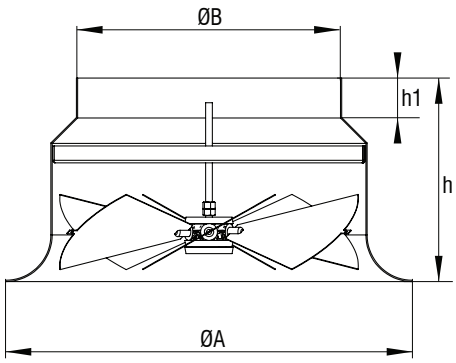
VARIABLE SWIRL DIFFUSER

DVV

TABLE OF CONTENTS

Definition of symbols:

V [m³/h]	- Air flow
V_{uk} [m³/h]	- Total air volume in motion
h [m]	- Distance from the ceiling to the occupied zone
H [m]	- Room height
A,B [m]	- Distance between diffusers
x [m]	- Distance from wall
L [m]	- Throw distance (x+h)
A_{ef} [m2]	- Effective discharge area
v_{ef} [m/s]	- Effective jet velocity
v_L [m/s]	- Average core velocity at distance L (m) from diffuser
v_h [m/s]	- Average core velocity at distance h (m) from diffuser
Δp [Pa]	- Total pressure drop
t_p [°C]	- Air temperature in the room
t_z [°C]	- Supply air temperature
t_m [°C]	- Core air temperature
Δt_z [°C]	- $(t_z - t_p)$
Δt_L [C°]	- $(t_m - t_p)$
i	- Induction V_{uk}/V
L_{WA} [dB(A)]	- Sound power level



DVV

- Ceiling diffuser for room heights from 4 to 10m.
- Made out of steel sheet, standard RAL 9010
- Adjustable blade angle
- Fixing with screws

Options

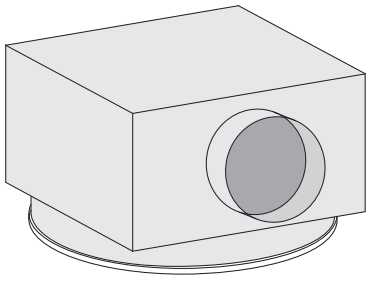
- Plenum box
- Manual drive
- Motor drive
- Thermostat drive
- RAL...

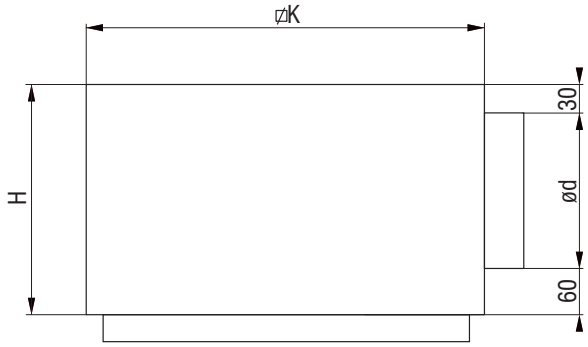
Dimensions

Size	A_{ef} [m²]	øB [mm]	øA [mm]	h [mm]	h1 [mm]	⍁K [mm]	H [mm]	ød [mm]
250	0,048	248	417	230	40	384	290	198
315	0,077	313	491	250	40	484	340	248
400	0,125	398	615	265	50	590	405	313
500	0,195	498	796	320	50	590	405	313
630	0,310	628	935	370	40	650	540	448
800*	0,503	798	1142	451	40	950	590	498

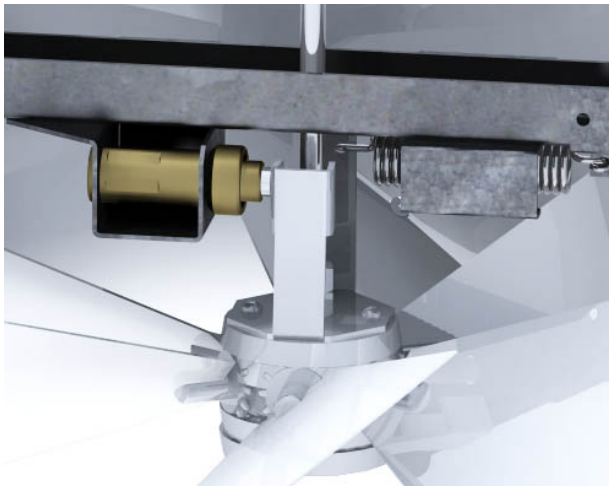
*Size 800 at special request

Plenum box for round diffuser UPK2



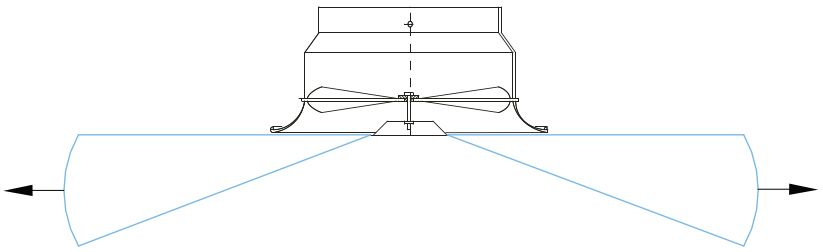


Thermostat drive

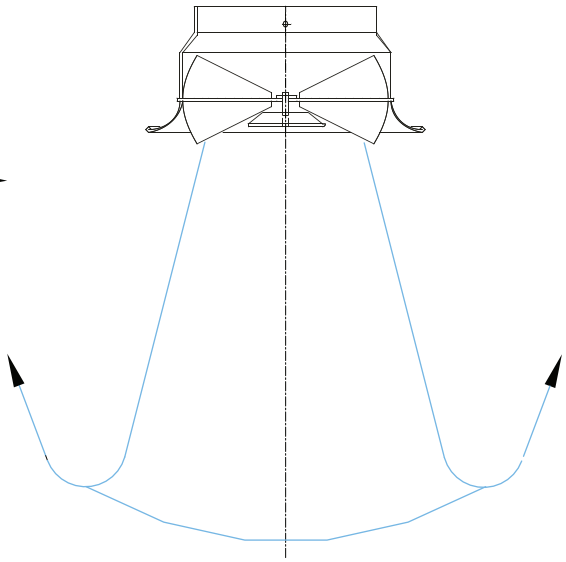


- adjusting throw distance , according to temperature of supply air.
- no additional power supply needed

Cooling mode



Heating mode

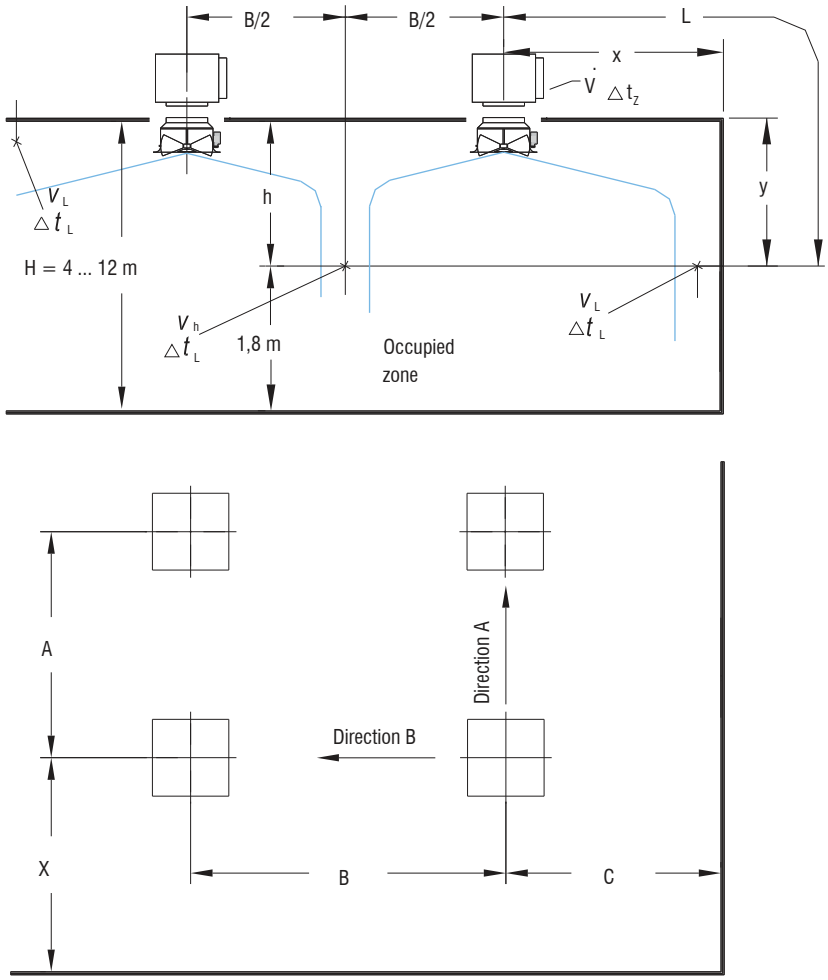


Ordering key:

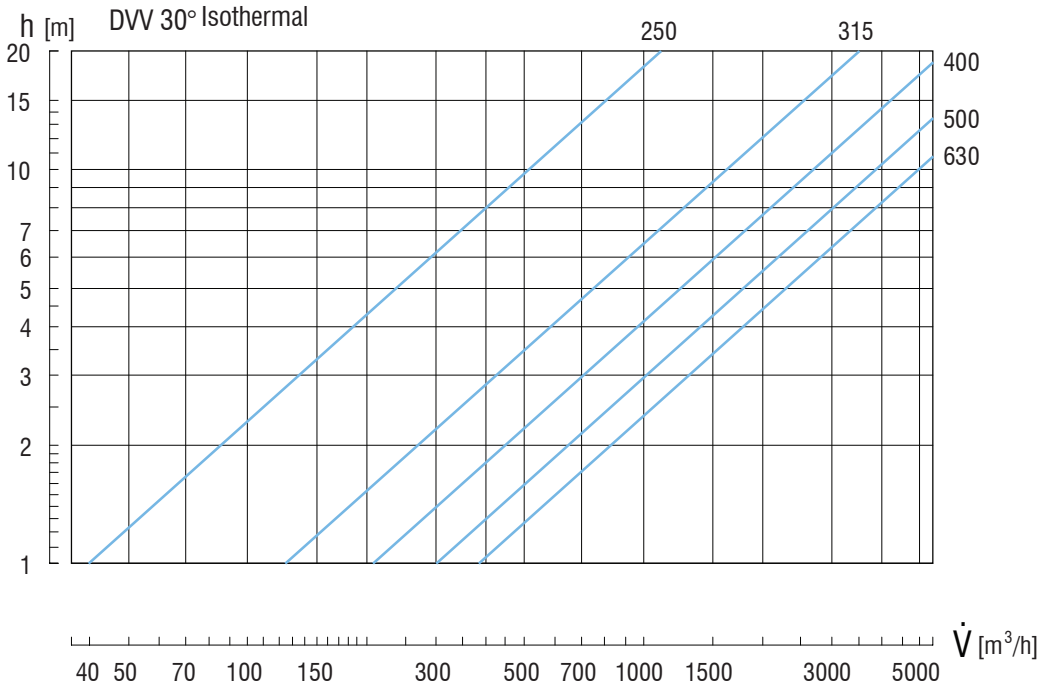
Type	**DVV - 500 - M230 - OZ - PL - ød**
Size	
R - manual drive **M230** - motor drive 230V **M24** - motor drive 24V **T** - thermostat drive (no power supply)	
OZ - two positions **K** - continous	
Plate 595x595 (installation in suspended ceiling)	
Connection diameter	

*Screws are not delivered

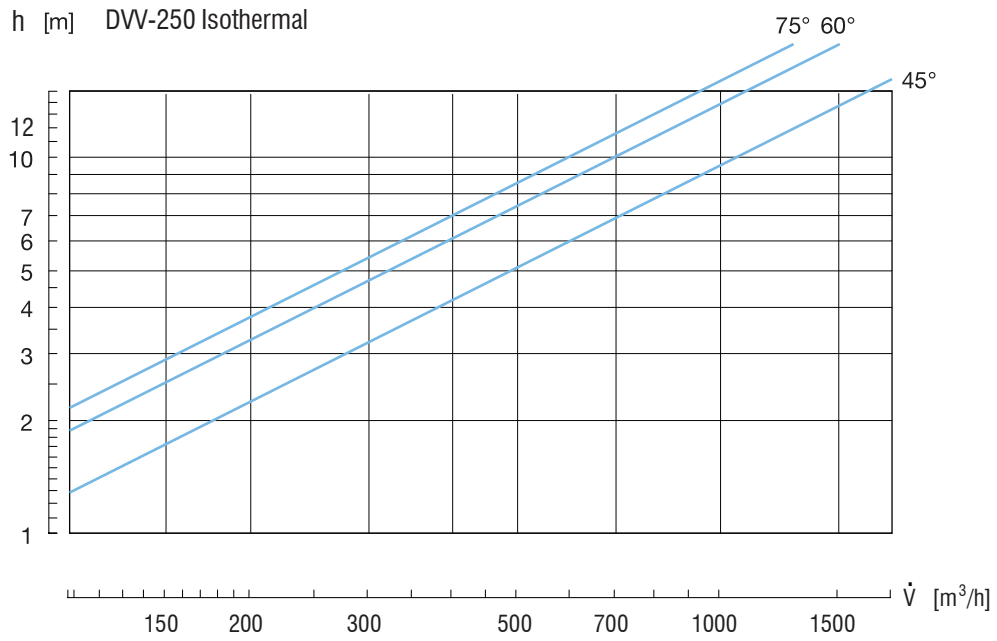
DISCHARGE DIAGRAM

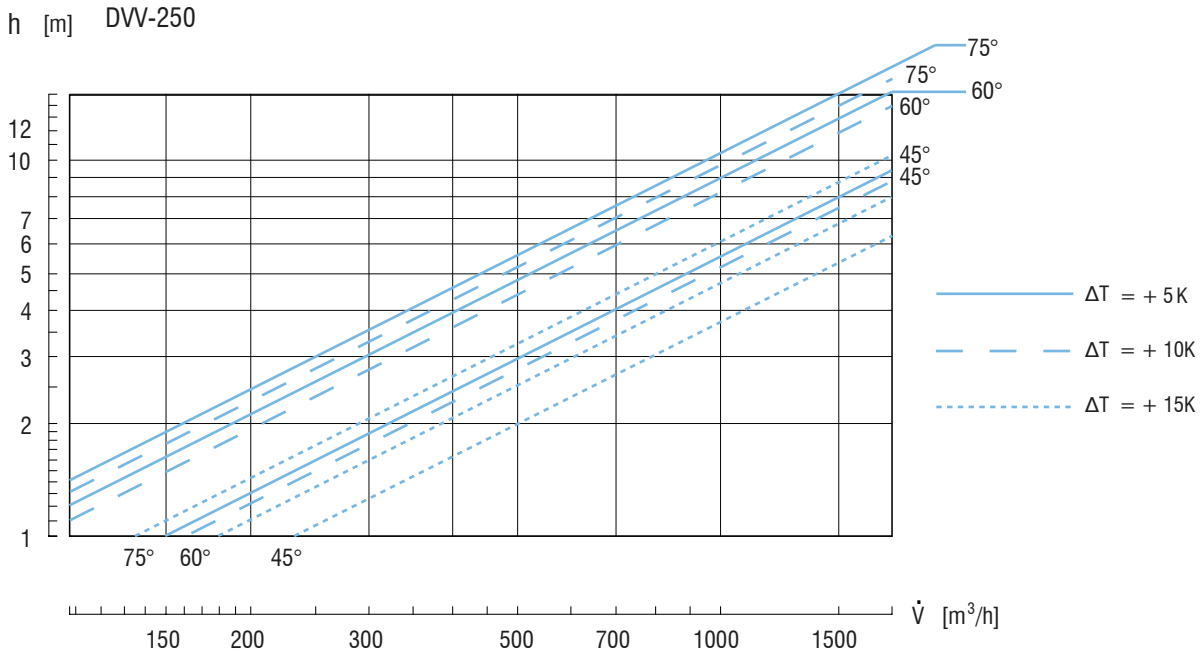


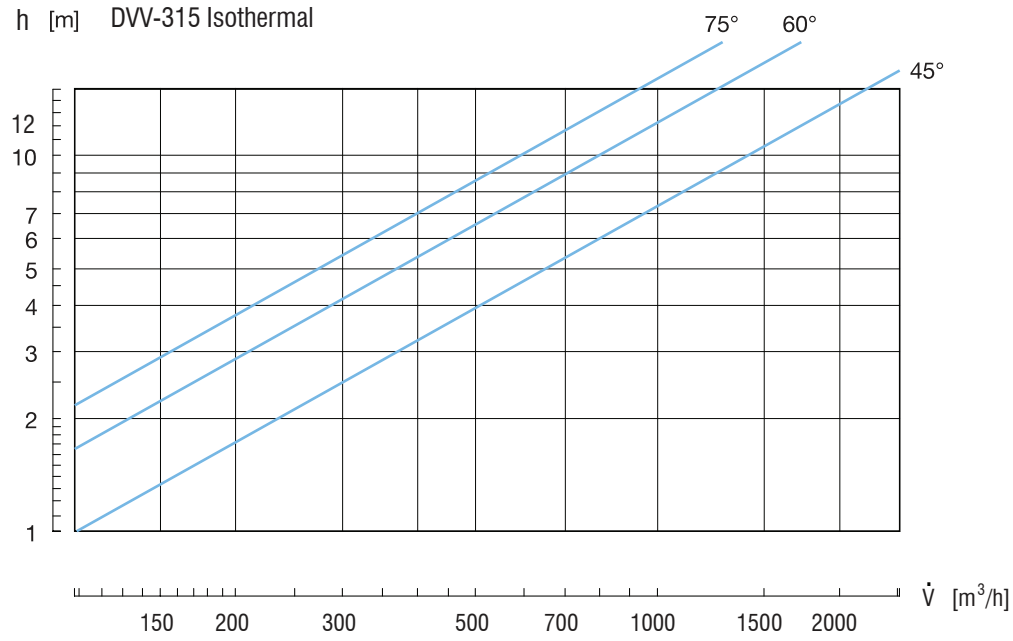
SELECTION DIAGRAM

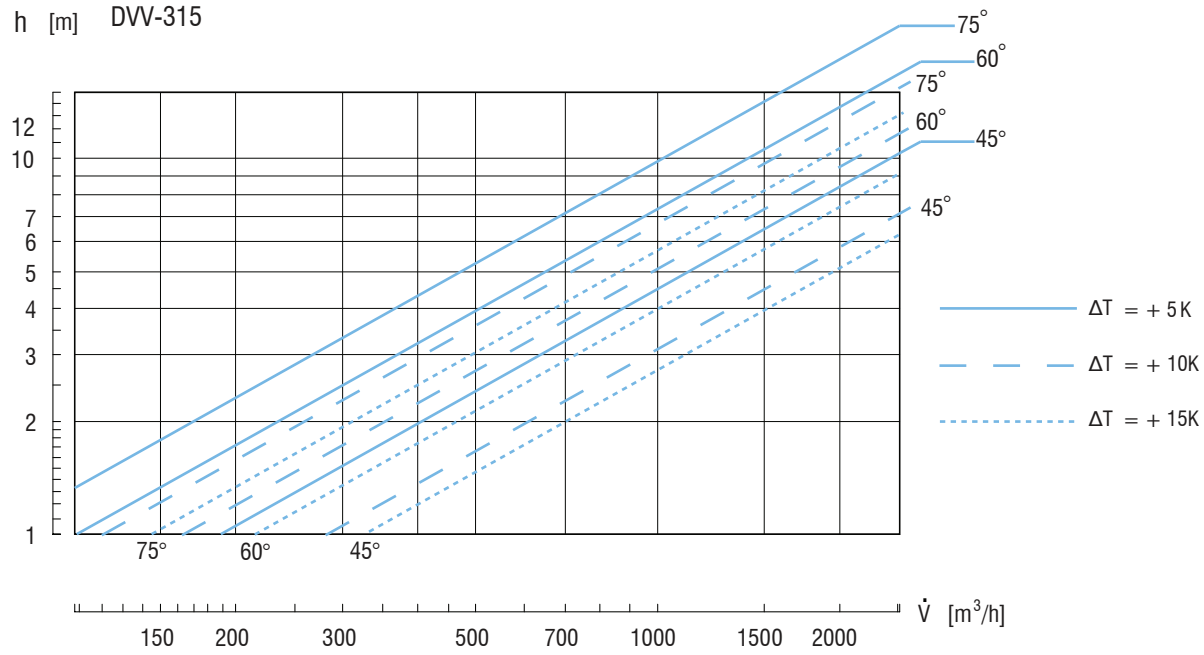


If installed less than 300mm from ceiling, values from diagrams should be multiplied by 1.4

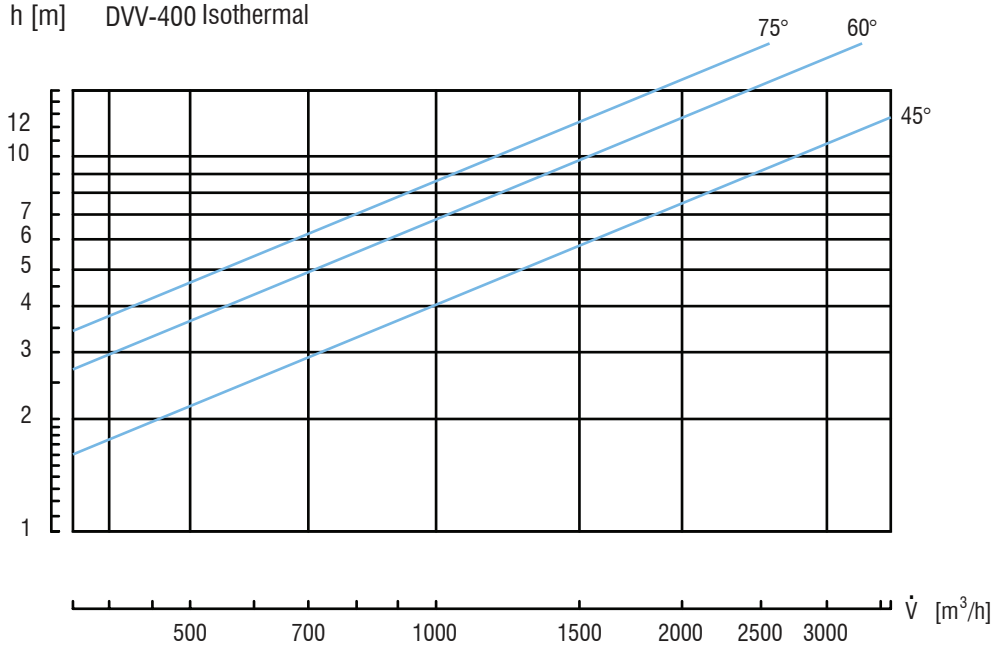




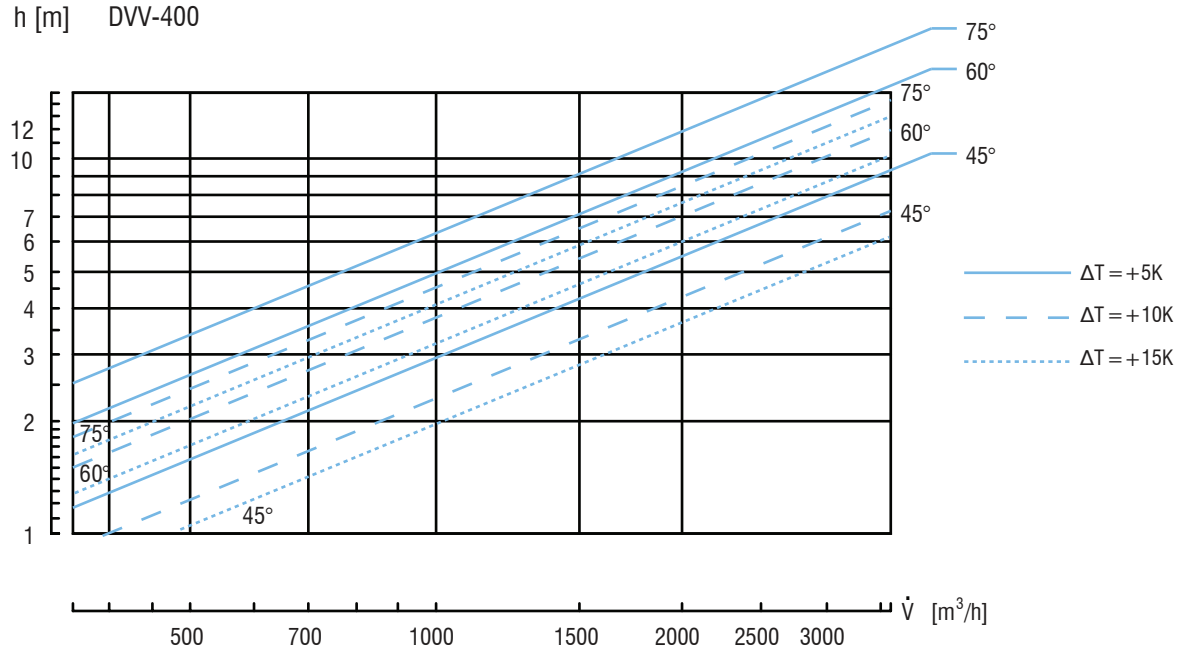

h [m]
DVV-315 Isothermal
75°
60°
45°
12
10
7
6
5
4
3
2
1
150
200
300
500
700
1000
1500
2000
V̇ [m³/h]

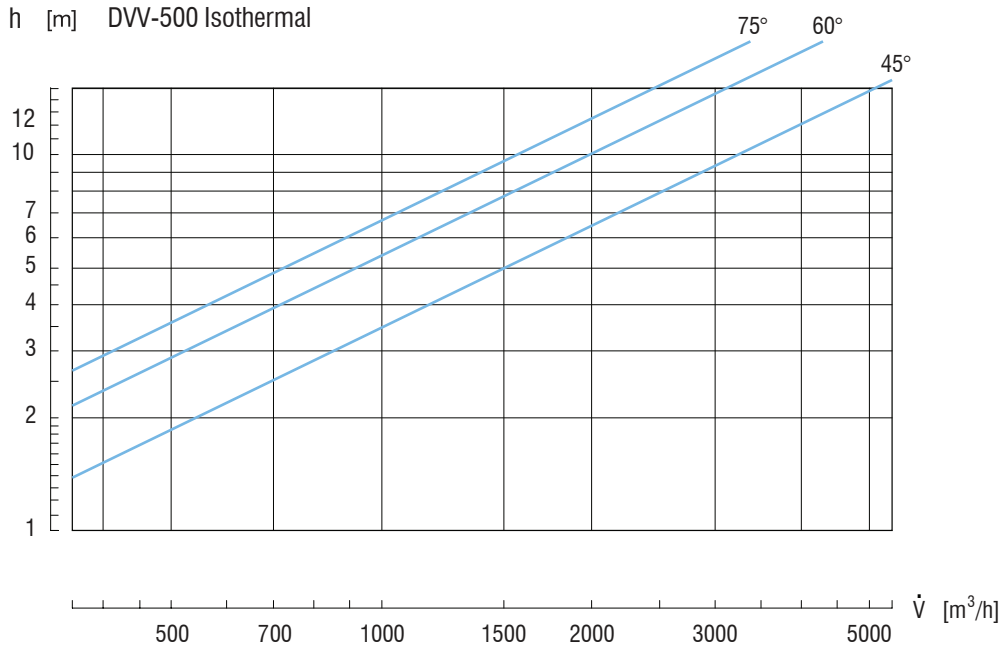

h [m]
DVV-315
75°
60°
75°
60°
45°
45°
12
10
7
6
5
4
3
2
1
75°
60°
45°
150
200
300
500
700
1000
1500
2000
V̇ [m³/h]
ΔT = + 5K
ΔT = + 10K
ΔT = + 15K

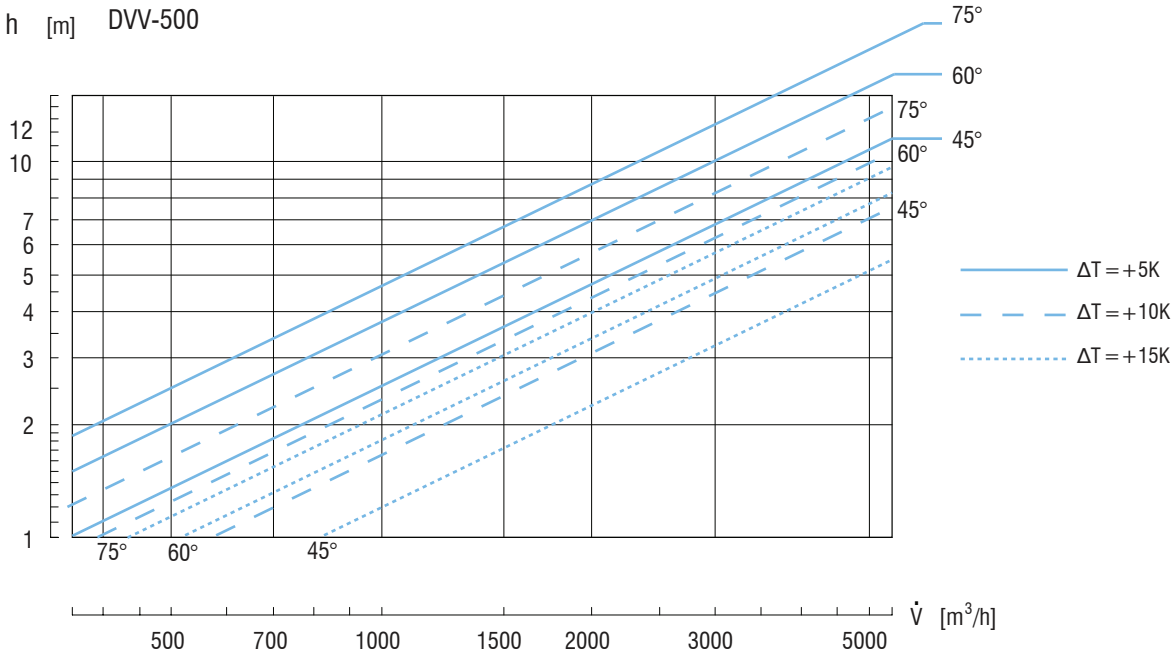
h [m] DVV-400 Isothermal



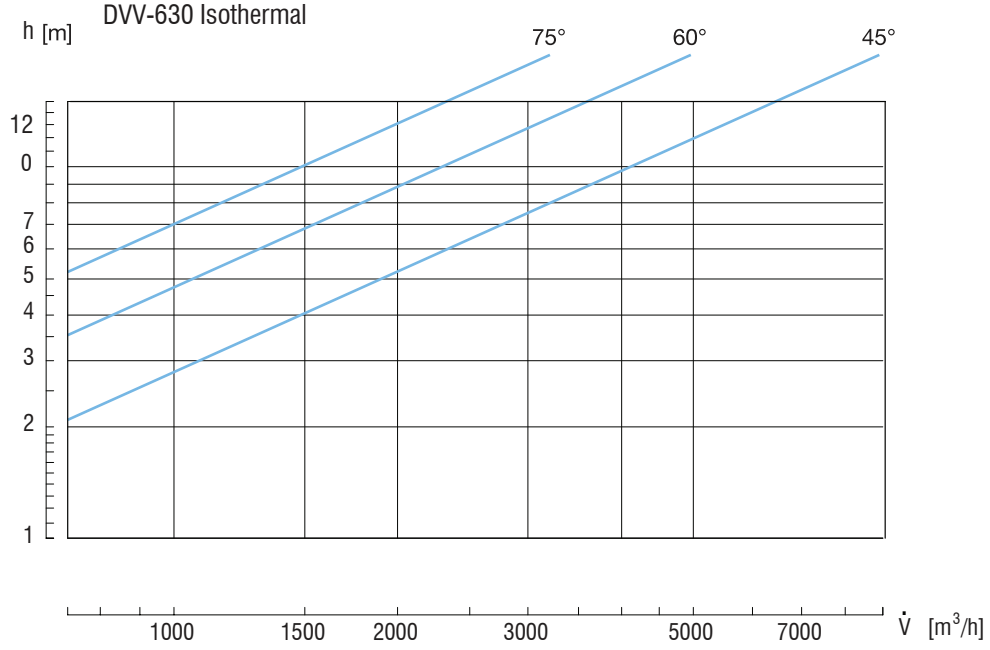
h [m] DVV-400



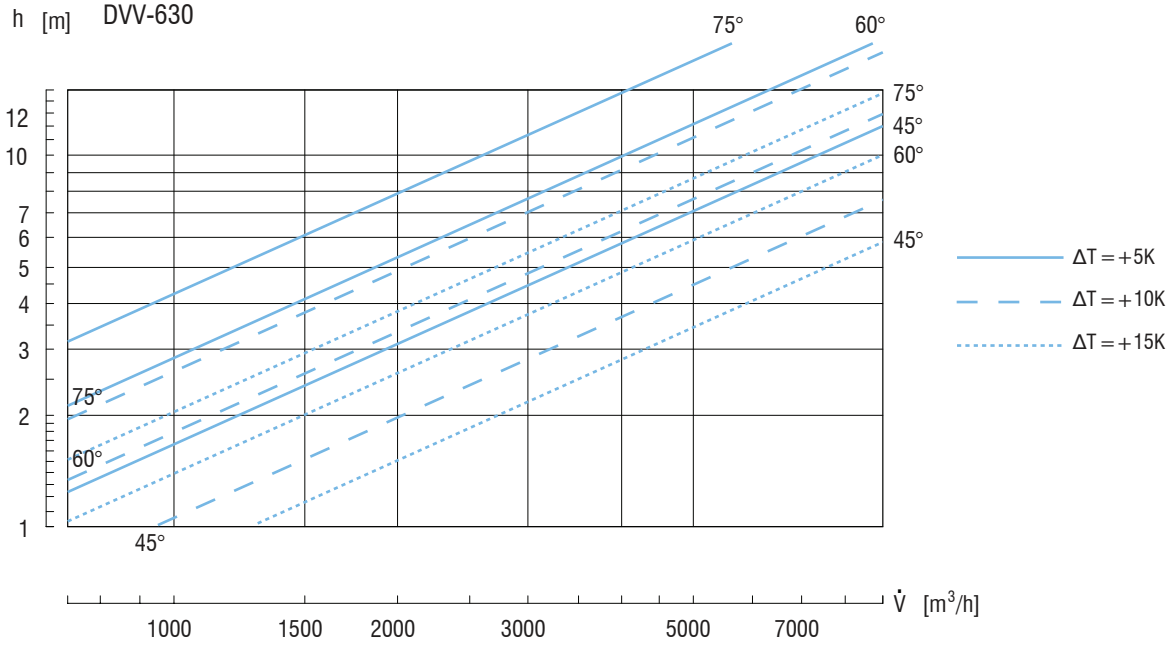

h [m] DVV-500 Isothermal
75°
60°
45°
12
10
7
6
5
4
3
2
1
500
700
1000
1500
2000
3000
5000
V̇ [m³/h]


h [m] DVV-500
75°
60°
75°
45°
60°
45°
12
10
7
6
5
4
3
2
1
75°
60°
45°
ΔT = +5K
ΔT = +10K
ΔT = +15K
500
700
1000
1500
2000
3000
5000
V̇ [m³/h]

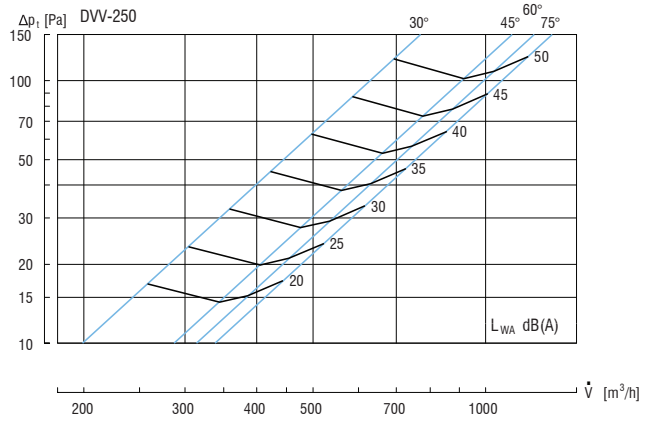
DVV-630 Isothermal



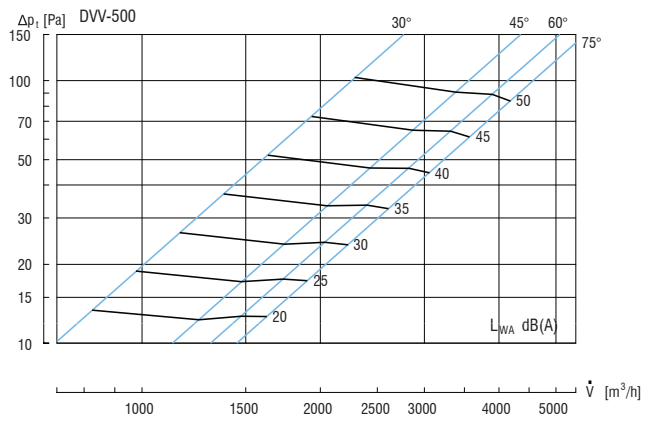
DVV-630



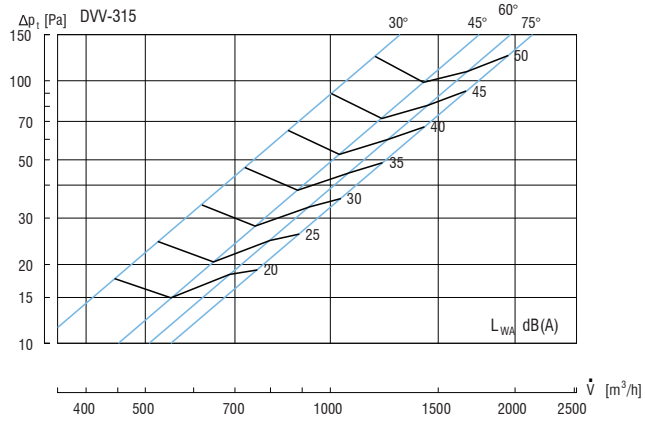
Sound level and pressure drop



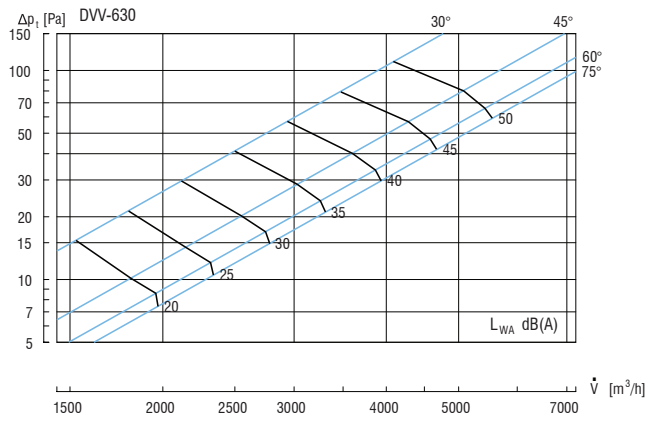
Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	7	1	-2	-2	-4	-9	-18	-21



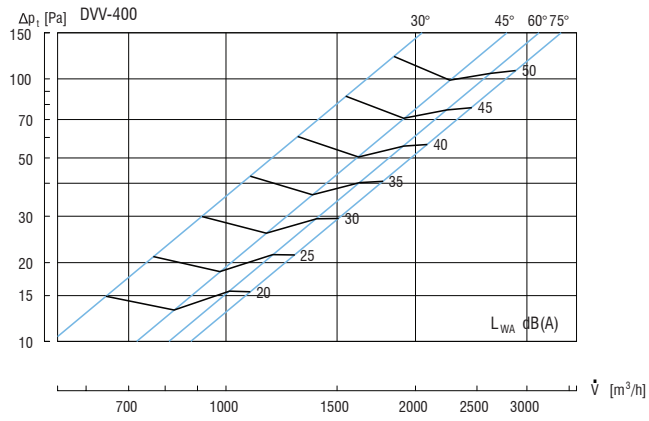
Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	12	1	-2	-1	-4	-12	-20	-22



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	10	2	-1	-3	-4	-10	-17	-21



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	15	5	0	-2	-5	-12	-18	-22



Hz	63	125	250	500	1K	2K	4K	8K
K_{ok}	12	1	-2	-2	-3	-13	-20	-23

Example:

Given:

Tip DVV 500
isothermal flow
h = 5 m
V = 1500 m³/h

Solution:

Diagram pg. 9
Angle 45°
Diagram pg. 11
Δp = 17Pa
L_{WA} = 25 dB (A)