

2/S12
v 3.3 (en)

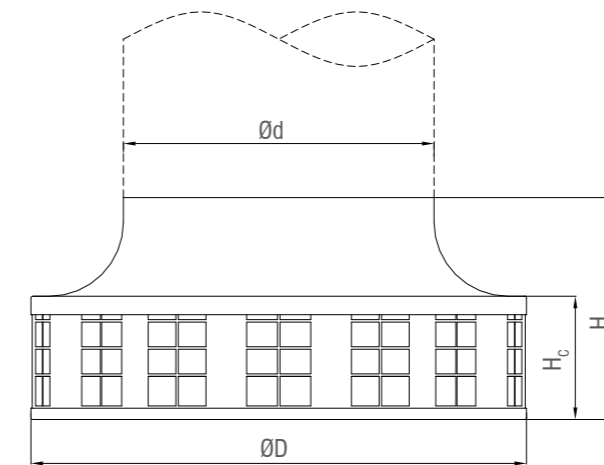
**DIFFUSER FOR HORIZONTAL OR VERTICAL
DISCHARGE**

DHV



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DHV

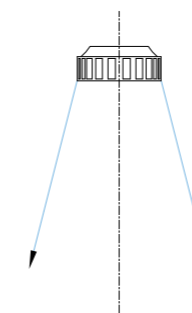
- Ceiling diffuser for room heights from 4 to 10m.
- Made out of steel sheet, standard RAL 9010
- Adjustable discharge direction

Options

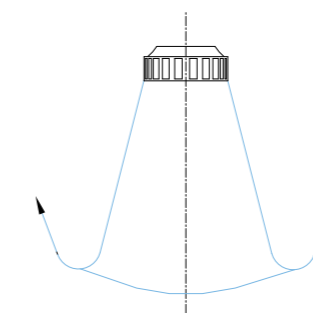
- RAL...
- Plenum box
- Motor drive

Air discharge types

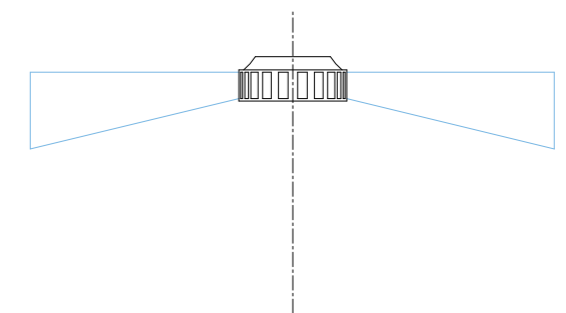
Isothermal vertical jet



Warm vertical jet



Cold horizontal jet



Definition of symbols:

V [m³/h]	- Airflow rate	t _z [°C]	- Supply air temperature
y [m]	- Vertical jet component	t _L [°C]	- Temperature at distance L
x [m]	- Horizontal jet component	t _p [°C]	- Room temperature
A,B [m]	- Distance between diffusers	Δt _z [K]	- (t _z -t _p)
C,X [m]	- Distance between diffuser and wall	Δt _L [K]	- (t _L -t _p)
L [m]	- Throw distance (x+h)	Δp [Pa]	- Total pressure drop
v _L [m/s]	- Average air velocity at distance h from diffuser	L _{WA} [dB(A)]	- Sound power level
h [m]	- Distance between ceiling and occupied zone		
v _h [m/s]	- Average air velocity between two diffusers at distance h (m) from diffuser		

DHV	Dimensions				Characteristics			Cooling		Heating	
	ØD [mm]	Ød [mm]	H [mm]	H _c [mm]	h [m]	V _{min} [m³/h]	V _{max} [m³/h]	Ah _s [m²]	Ah _{EF} [m²]	Av _s [m²]	Av _{EF} [m²]
300	302	180	145	80	3	200	900	0,03345	0,0268	0,03126	0,0250
400	402	250	180	100	3	300	1800	0,03978	0,0318	0,03781	0,0302
500	502	315	200	120	4	600	2500	0,06115	0,0489	0,05972	0,0478
600	602	400	220	135	5	800	3500	0,08121	0,0650	0,07996	0,0640
800	802	500	310	185	5	1500	6300	0,17523	0,1402	0,15848	0,1268

Ordering key:

Horizontal-vertical diffuser DHV - 500 - M230 - OZ - A - H - ød - Z

Nominal dimension

R - manual drive
M230 - motor drive 230V
M24 - motor drive 24V
OZ - two positions
K - continuous
A - supply air
B - exhaust air
H - horizontal connection
Connection diameter
Z - insulation

*Screws are not delivered
**Ordering key for Plenum box on page 184
***Only plenum box UPK2

SELECTION DIAGRAMS

Diagram 1: Pressure drop and sound level diagram for DHV

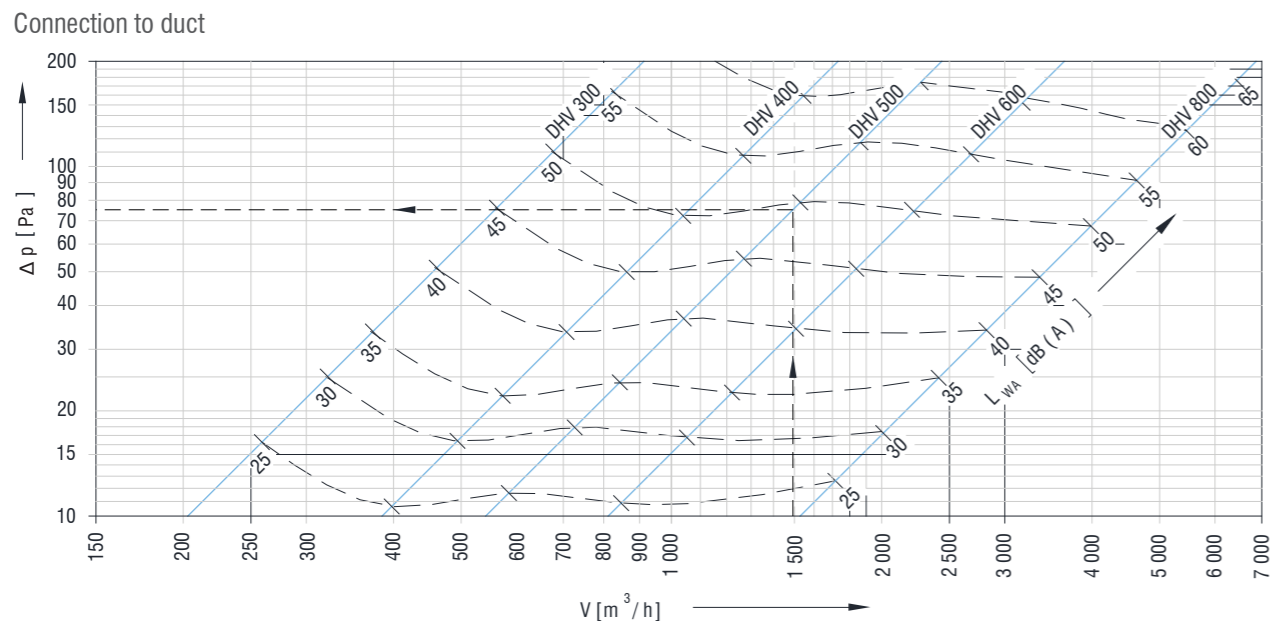


Diagram 2: Pressure drop and sound level diagram for DHV 300

Diffuser with plenum box

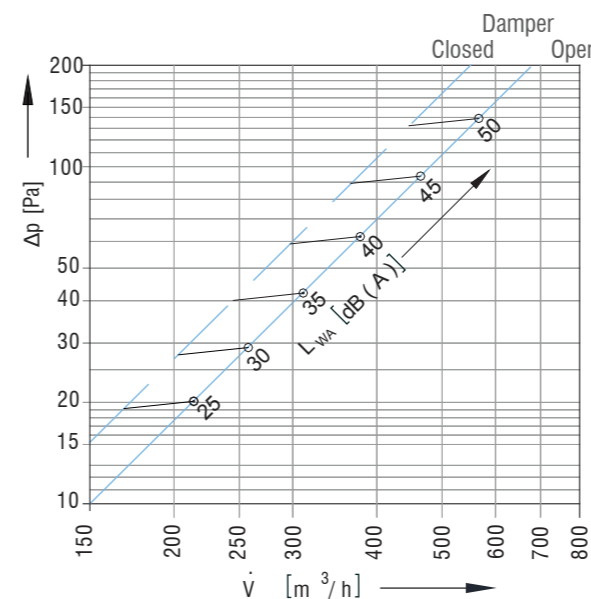


Diagram 3: Pressure drop and sound level diagram for DHV 400

Diffuser with plenum box

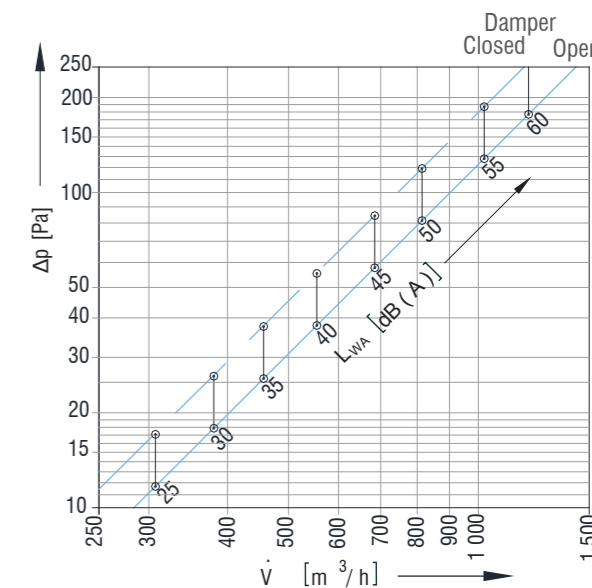


Diagram 4: Pressure drop and sound level diagram for DHV 500

Diffuser with plenum box

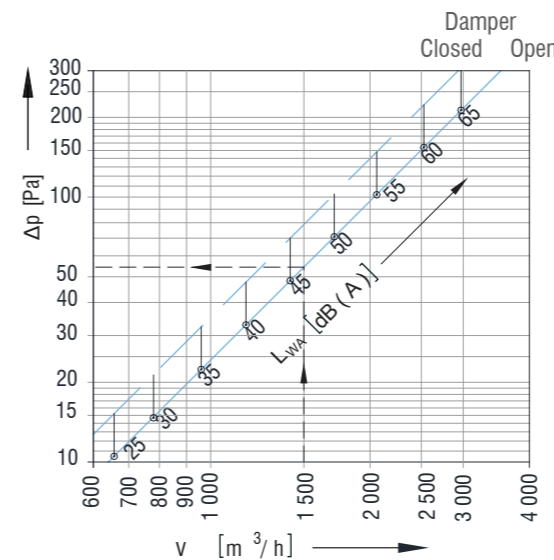


Diagram 5: Pressure drop and sound level diagram for DHV 600

Diffuser with plenum box

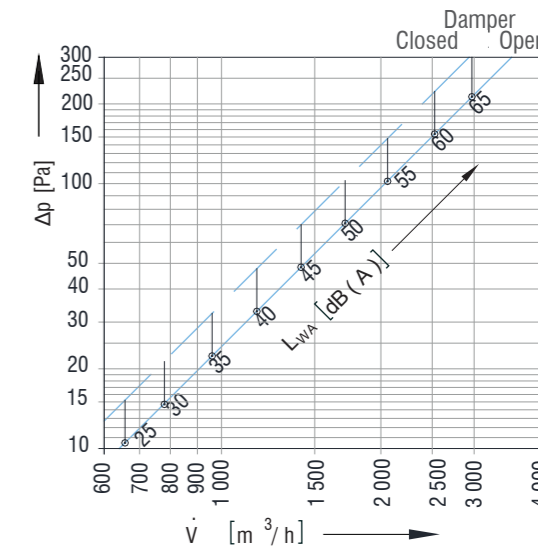


Diagram 5: Pressure drop and sound level diagram for DHV 800

Diffuser with plenum box

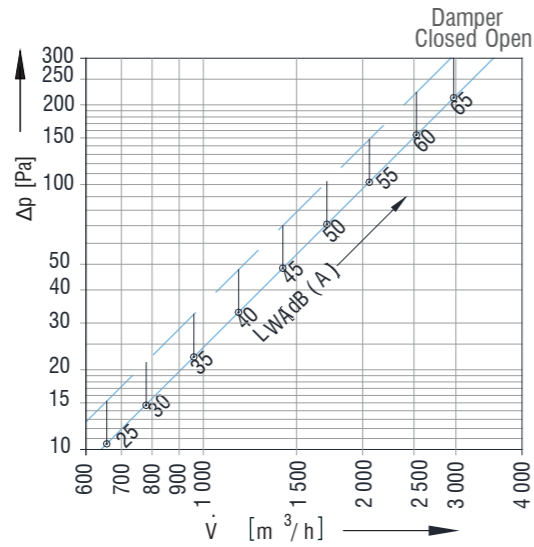


Diagram 7: Vertical warm jet throw diagram for DHV 300

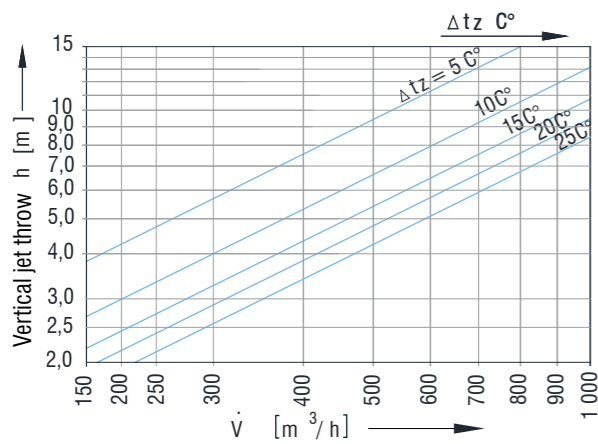


Diagram 8: Vertical isothermal jet throw diagram for DHV 300

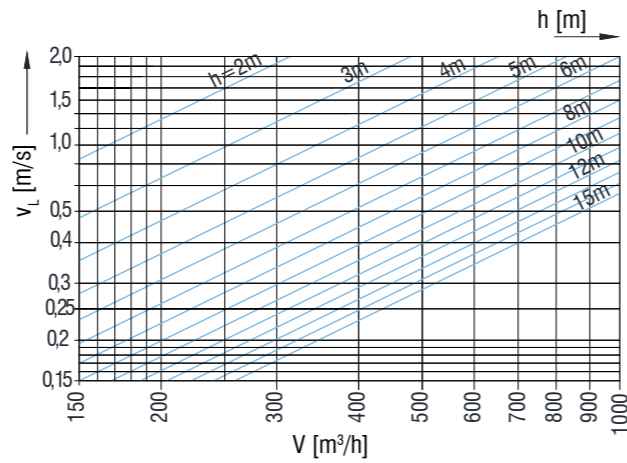


Diagram 9: Maximum jet velocity diagram for DHV 300

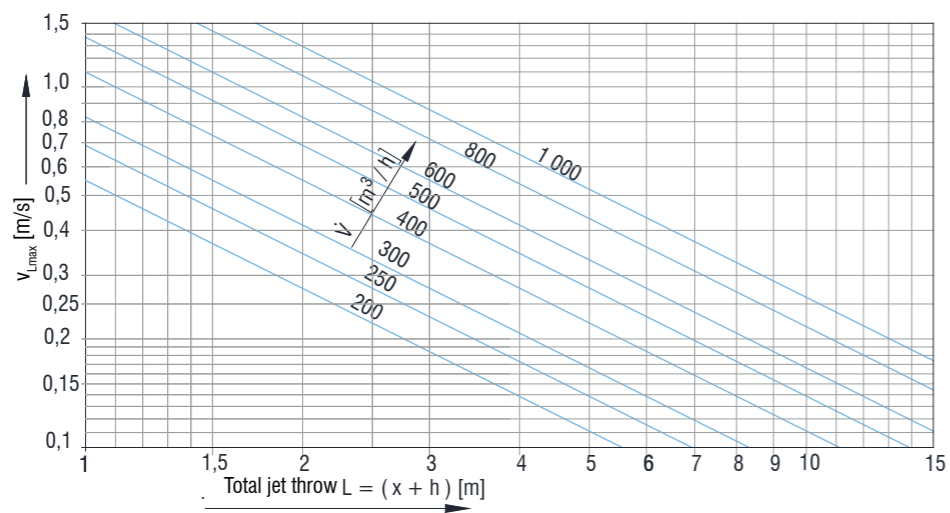


Diagram 10: Vertical warm jet throw diagram for DHV 400

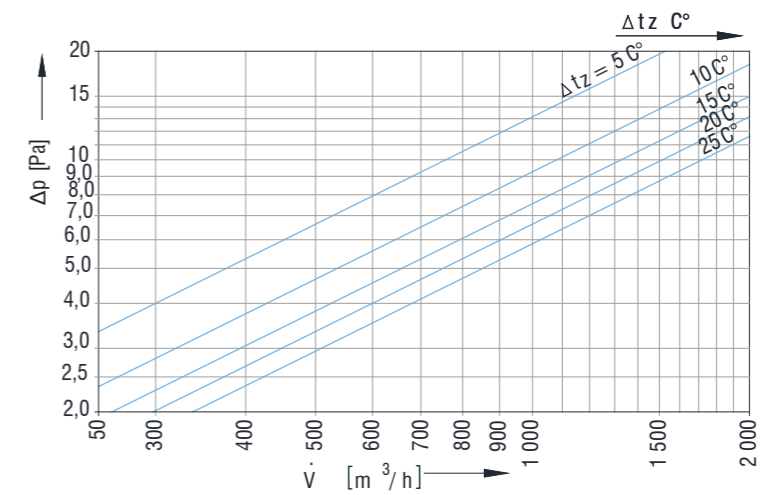


Diagram 11: Vertical isothermal jet throw diagram for DHV 400

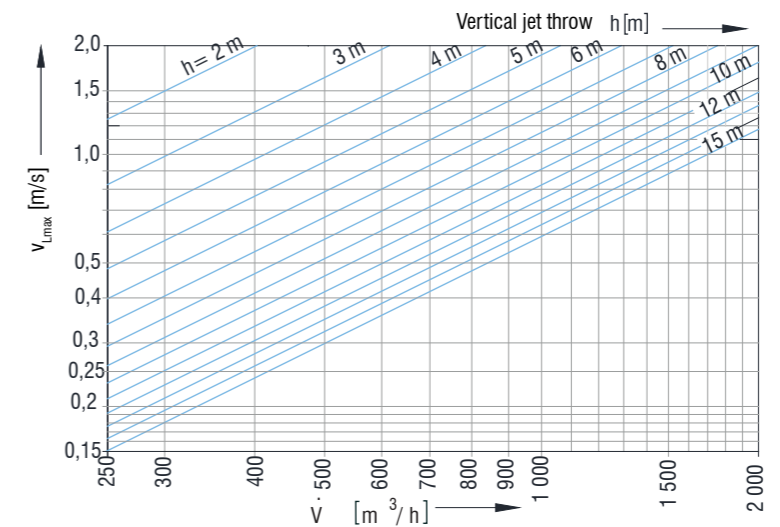


Diagram 12: Maximum jet velocity diagram for DHV 400

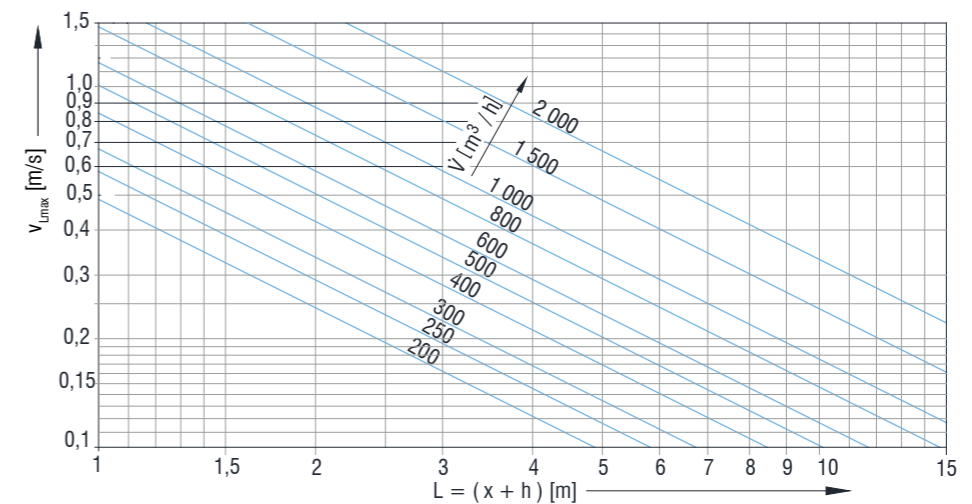


Diagram 13: Vertical warm jet throw diagram for DHV 500

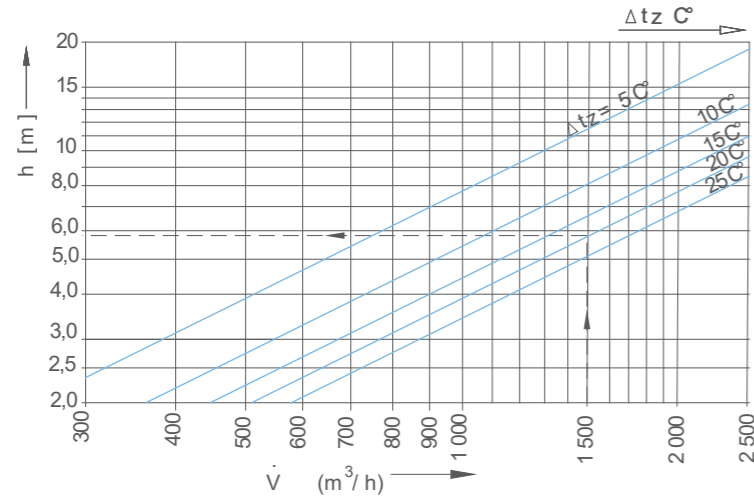


Diagram 14: Vertical isothermal jet throw diagram for DHV 500

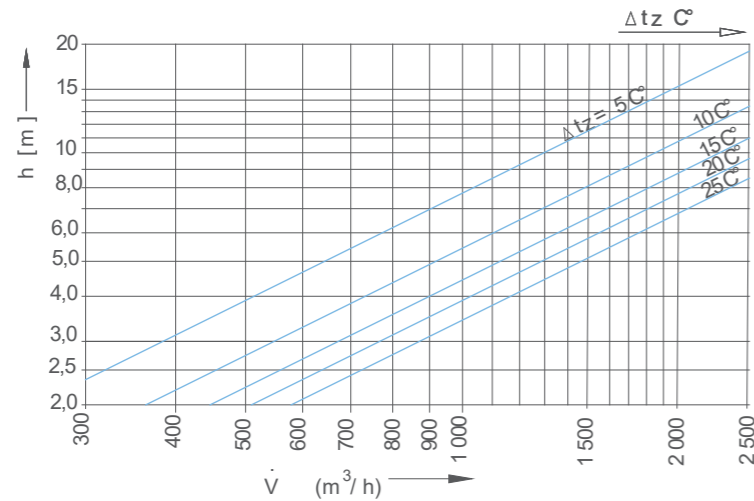


Diagram 15: Maximum jet velocity diagram for DHV 500

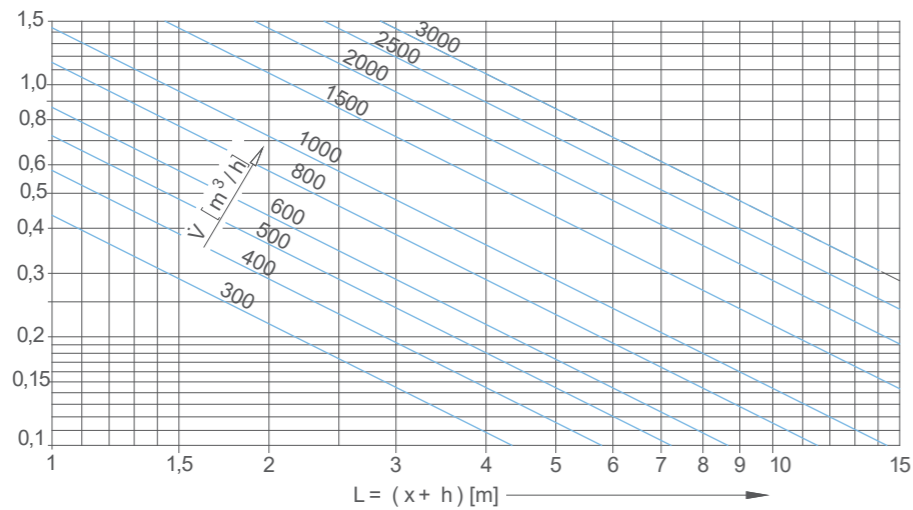


Diagram 16: Vertical warm jet throw diagram for DHV 600

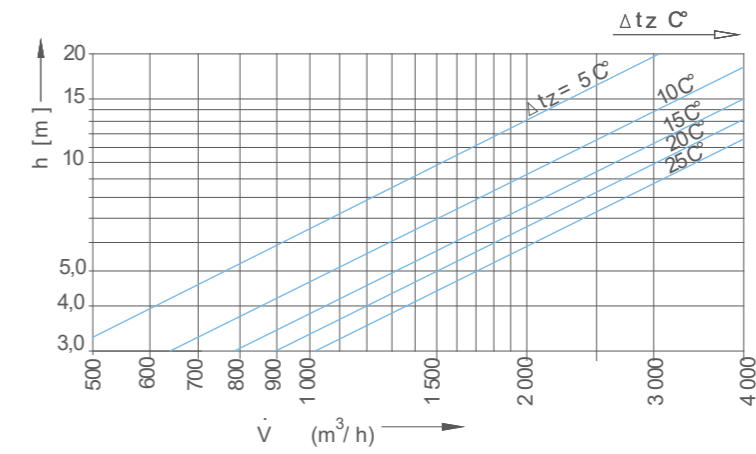


Diagram 17: Vertical isothermal jet throw diagram for DHV 600

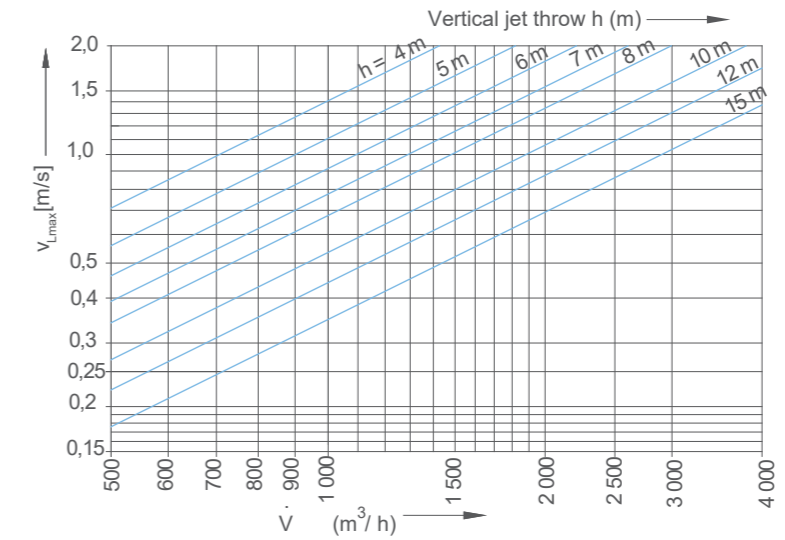


Diagram 18: Maximum jet velocity diagram for DHV 600

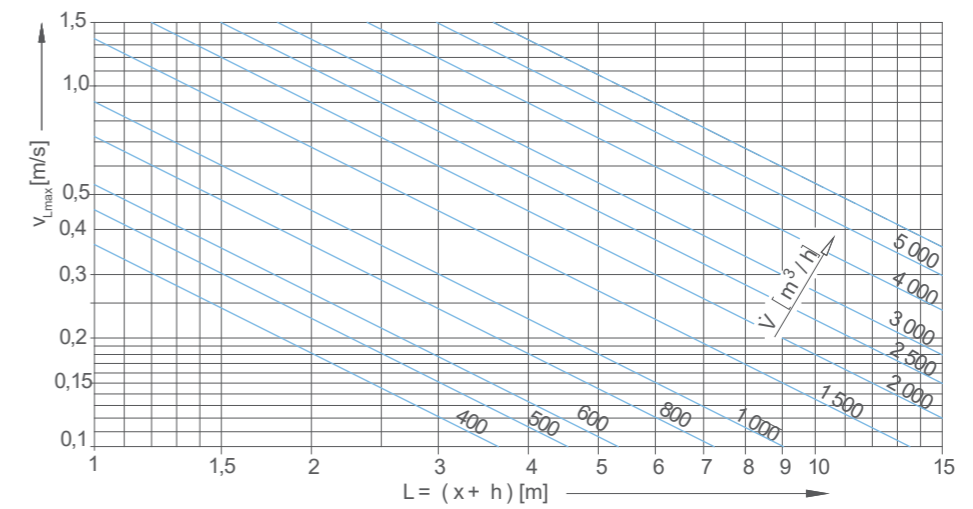


Diagram 19: Vertical warm jet throw diagram for DHV 800

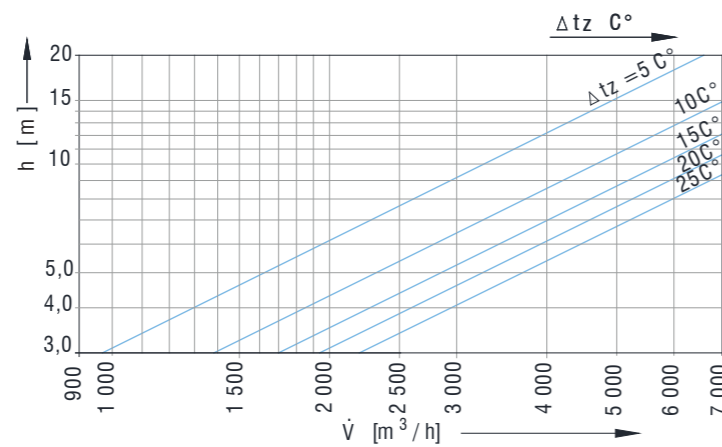


Diagram 20: Vertical isothermal jet throw diagram for DHV 800

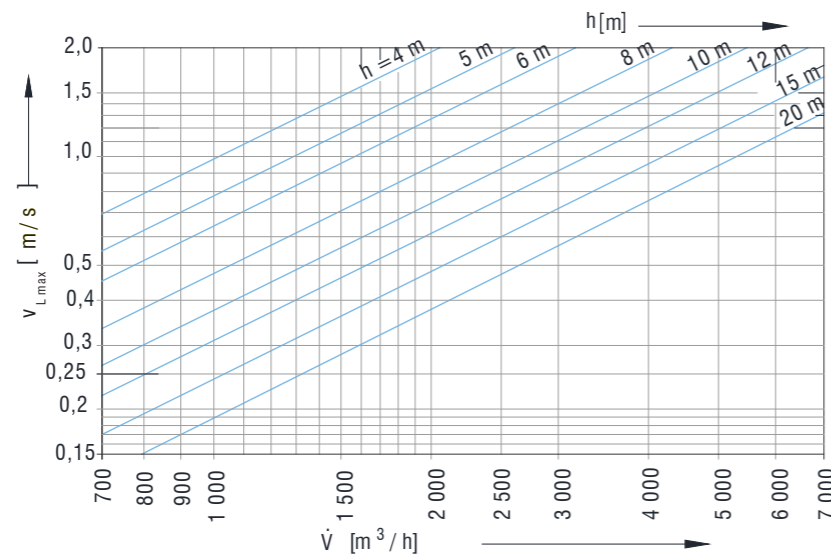
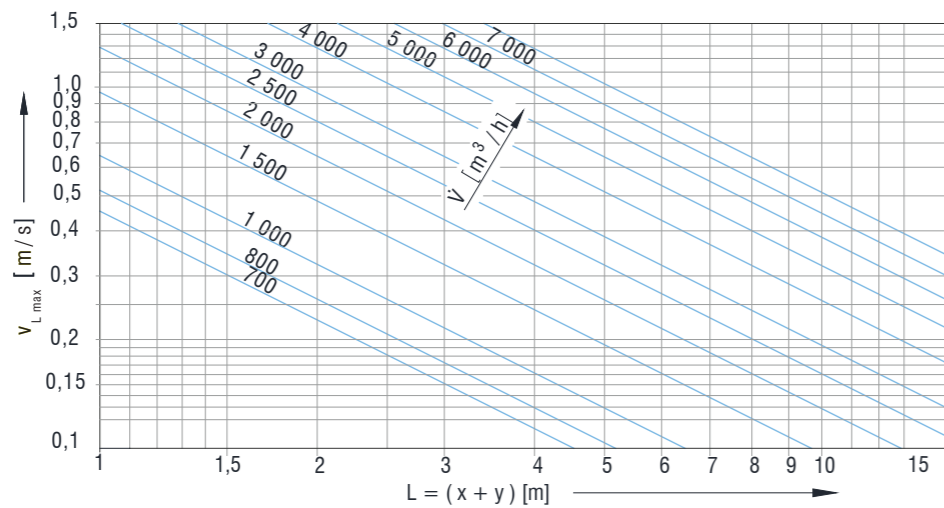


Diagram 21: Maximum jet velocity diagram for DHV 800



Example:

Given:

Type DHV 500
 $V = 1500 \text{ m}^3/\text{h}$
 $\Delta T = +20 \text{ }^\circ\text{C}$
 Damper open 100%

Solution:

Installation on duct

Diagram 1:
 $L_{WA} = 50 \text{ dB(A)}$
 $\Delta p = 78 \text{ Pa}$

Installation with plenum

Diagram 4:
 $L_{WA} = 46 \text{ dB(A)}$
 $\Delta p = 53 \text{ Pa}$

Diagram 13:
 $h = 6 \text{ m}$