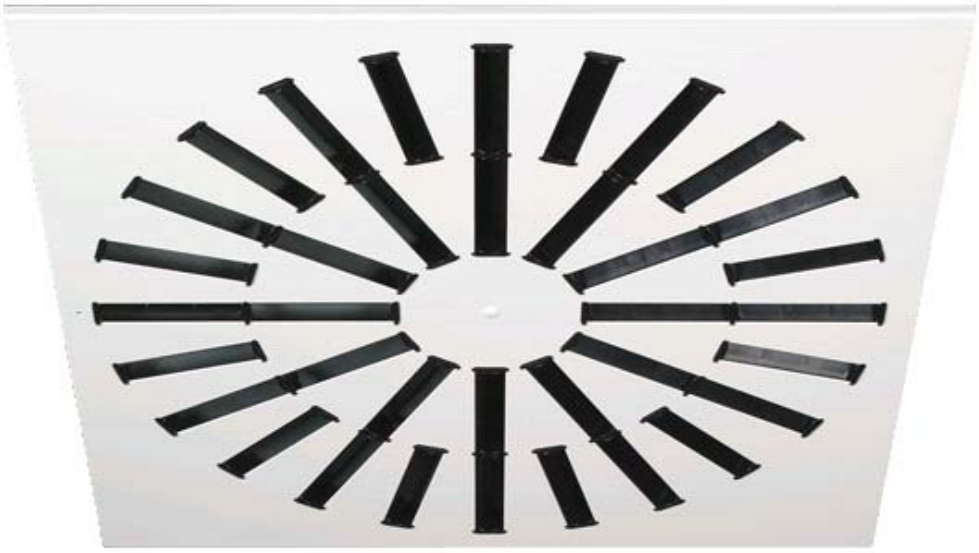


klin
SYSTEM

AXO adjustable vanes swirl diffusers

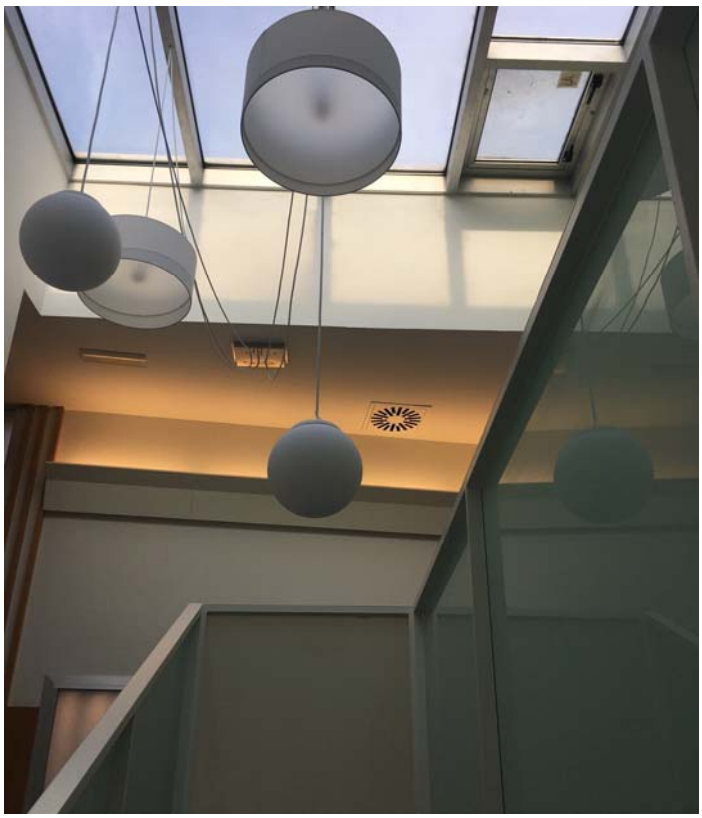
The **AXO** swirl diffusers ed are designed for air supply in HVAC systems.

- Swirl air supply with a Coanda effect.
- Installation in false ceiling or suspended from the ceiling.
- Sectorized vanes, individually adjustable in radial arrangement.
- Appropriate diffuser for CAV or VAV systems.
- Suitable for installations in premises between 2.6 and 4 m with a temperature differential up to 12ºC.

Product advantages:

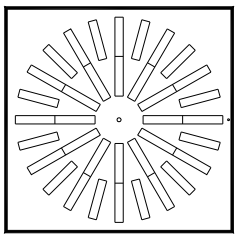
- Air supply with a high induction rate and reduced stratification.
- Adjustable vane angle to adapt the diffuser to different premises.
- The rear sectorization of the fins guarantees a uniform air flow throughout the passage section.

Models:
AXO-S
AXO-KLIN
AXO-C
AXO-R

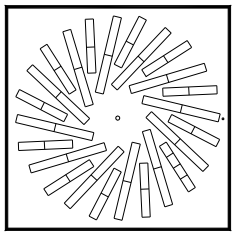


- ❑ Offices
- ❑ Hotels
- ❑ Shopping centres

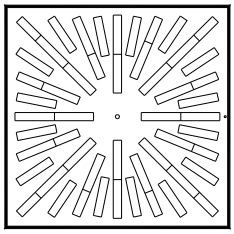
AXO-S



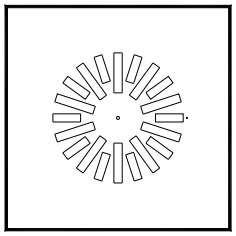
AXO-SY



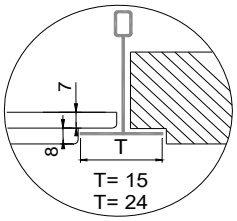
AXO-SX

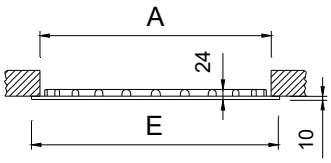


AXO-S.../SR/



AXO-S…/T…/





	E	A
300	295	280
310	308	289
400	395	376
500	495	476
600	595	576
610	605	591
625	620	601
675	670	651
800	795	776
825	820	801

AXO-S

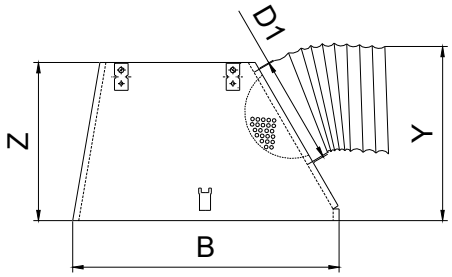
CLASSIFICATION

AXO-S Diffuser with vanes in radial arrangement.
…-SY Vanes in radial inclined arrangement.
…-SX Vanes in square radial arrangement.
…/SR/ Reduced supply area.
…/T15/ Panel with angled borders to replace an angled ceiling tile profile 15 mm.
…/T24/ Panel with angled borders to replace an angled ceiling tile profile 24 mm.

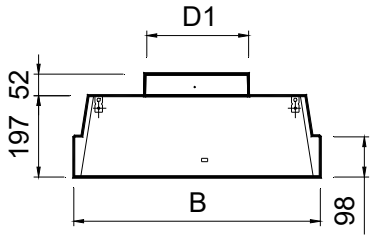
MATERIAL

Diffuser constructed from galvanised steel and deflection vanes made of injected plastic, ABS type.
All diffusers are provided with a seal on the back of the frame in order that the perimeter in contact with the plenum box or the ceiling is airtight.

BOXSTAR/

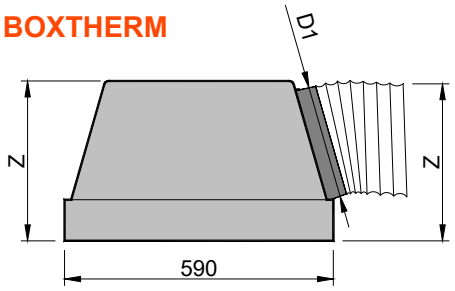


BOXSTAR /S/



	B	Z	Y	D1
300	290	250	275	123
310	303	250	275	123
400	390	300	325	198
500	490	300	325	198
600-D1:250	590	350	375	248
600-D1:200	590	300	325	198
610-D1:250	600	350	375	248
610-D1:200	600	300	325	198
625-D1:250	615	350	375	248
625-D1:200	615	300	325	198
675-D1:250	665	350	375	248
675-D1:200	665	300	325	198
800	790	415	440	313
825	815	415	440	313

BOXTHERM



	Z	D1
BOXTHERM 600-DIAM250	350	248
BOXTHERM 600-DIAM200	300	198

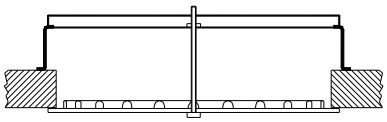
ACCESSORIES

BOXSTAR Plenum box with a lateral circular connection. It includes supports to hang from the ceiling. The crossbar is supplied separately to be assembled manually on the work site.
Made in galvanised steel.
…/S/ Upper circular connection.
…-R Air flow damper in the spigot.
The AXO diffusers incorporate a vane, indicated by means of a point, that can be positioned totally in vertical to allow the access to the regulator once the diffuser is mounted.
…/AIS/ Plenum box with thermal insulation inside. Foam density 25 kg / m3 ISO 845. Thermal conductivity 10º C_0,040 W / mºK EN 12667. Classified reaction to fire B-s1, d0 EN 13501-1.

BOXTHERM Stackable pyramidal plenum box with a lateral circular connection. Made of 22 mm thickness expanded polystyrene in grey dark colour, which acts as a thermo-acoustic insulator. It includes supports to hang from the ceiling. The crossbar is supplied separately to be assembled manually on the work site. Weight:1,7 kg. Thermal transmission coefficient of 0.0297 w/mk. This plenum complies with the fire reaction specifications DIN 4102 Part 1 B1. Acoustic power reduction between 2 and 3 dB(A), respect to a metallic plenum box.
…-R Air flow damper in the spigot.

PMXO Crossbar suitable for mounting in false ceiling with rectangular duct.

1)



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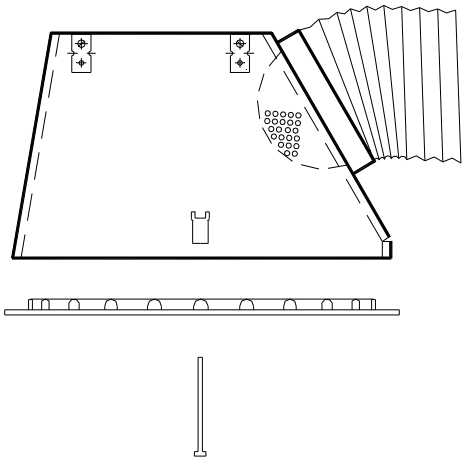


FIXING SYSTEMS

1) Connection into the crossbar or to the plenum box by means of central screw. Plenum box incorporates supports to hang the assembly from the ceiling with drops rods.

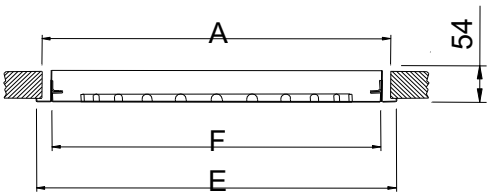
FINISHES

R9016S Painted white RAL 9016 (60-70% gloss)
R9010S Painted white RAL 9010 (60-70% gloss)
RAL... Painted in other RAL colours
…/AB/ ABS plastic vanes in white.

SPECIFICATION TEXT

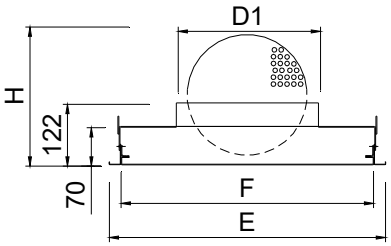
Supply and mounting of square swirl diffuser with individually adjustable radial vanes series **AXO-S+BOXSTAR-R R9010S dim. 600** constructed from galvanised steel paint white RAL 9010 (60-70% gloss) and black ABS plastic vanes. Lateral circular connection pyramidal plenum box with air flow damper in the spigot. Manufacturer **MADEL**.

AXO-S-KLIN

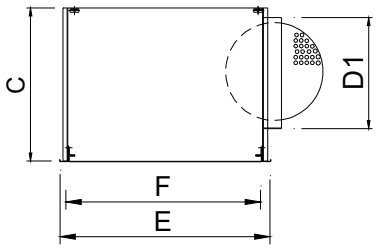


	E	A	F
400	395	369	345
500	495	469	445
600	595	569	545
610	605	579	555
625	620	594	570
675	670	644	620
600-400	595	569	545
600-500	595	569	545
610-400	605	579	555
610-500	605	579	555
625-400	620	594	570
625-500	620	594	570
675-400	670	644	620
675-500	670	644	620

AXO-S-KLIN+PLK…-R



AXO-S-KLIN+PLK/L/…-R



	E	F	D1	H	C
400	395	365	198	205	320
500	495	465	248	286	370
600	595	565	313	353	435
610	605	575	313	353	435
625	620	590	313	353	435
675	670	640	313	353	435

AXO-S-KLIN

CLASSIFICATION

AXO-S-KLIN Hinged removable core diffuser for the easy access to the installations above the ceiling with no need of tools, by means of PUSH fasteners.
By slightly pressing on the invisible latch, the core opens, remaining hinged on one side. If necessary, the core can be easily removed for maintenance.

MATERIAL

Diffuser constructed from galvanised steel and deflection vanes made of injected plastic, ABS type.

ACCESSORIES

PLK Plenum box fixed to the diffuser with an upper circular connection. Made in galvanised steel.
…/L/ Lateral circular connection.
…-R Air flow damper in the spigot.
…/AIS/ Plenum box with thermal insulation inside. Foam density 25 kg / m3 ISO 845. Thermal conductivity 10º C_0,040 W / mºK EN 12667. Classified reaction to fire B-s1, d0 EN 13501-1.

1)

FIXING SYSTEMS

1) Suspended at the false ceiling.

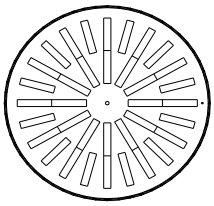
FINISHES

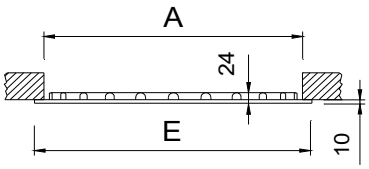
R9016S Painted white RAL 9016 (60-70% gloss)
R9010S Painted white RAL 9010 (60-70% gloss)
RAL... Painted in other RAL colours
…/AB/ ABS plastic vanes in white.

SPECIFICATION TEXT

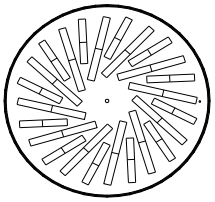
Supply and mounting of square swirl diffuser with adjustable vanes with hinged removable core without tools, by pressing on the invisible PUSH fasteners series **AXO-S-KLIN+PLK-R R9010S dim. (mm)** constructed from galvanised steel paint in white RAL 9010 (60-70% gloss) and black ABS plastic vanes. With upper circular connection plenum box and air flow damper in the spigot.
Manufacturer **MADEL**.

AXO-C



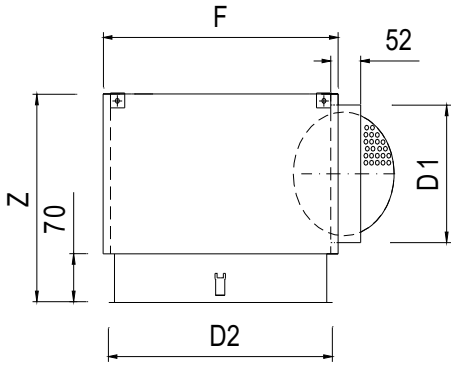


AXO-CY



	E	A
300	300	284
400	400	376
500	500	476
625	625	601
825	825	801

PLXOC



	D2	F	Z	D1
300	295	315	300	198
400	395	415	300	198
500	495	515	300	198
625	620	640	350	248
825	820	840	415	313

AXO-C

CLASSIFICATION

AXO-C Circular diffuser with vanes in circular radial arrangement.
…-CY Vanes in circular radial arrangement, inclined in relation to the center.

MATERIAL

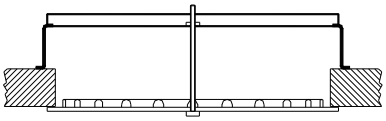
Diffuser constructed from galvanised steel and deflection vanes made of injected plastic, ABS type. All diffusers are provided with a seal on The back of the frame in order that the perimeter in contact with the plenum box or the ceiling is airtight.

ACCESSORIES

PLXOC Plenum box with a lateral circular connection. Made in galvanised steel.
…/S/ Upper circular connection.
…-R Air flow damper in the spigot.
The AXO diffusers incorporate a vane, indicated by means of a point, that can be positioned totally in vertical to allow the access to the regulator once the diffuser is mounted.
…/AIS/ Plenum box with thermal insulation inside. Foam density 25 kg / m3 ISO 845. Thermal conductivity 10º C_0,040 W / mºK EN 12667. Classified reaction to fire B-s1, d0 EN 13501-1.

PMXO Crossbar suitable for mounting in false ceiling with rectangular duct.

1)



FIXING SYSTEMS

1) Connection into the crossbar or to the plenum box by means of central screw. Plenum box incorporates supports to hang the assembly from the ceiling with drops rods.

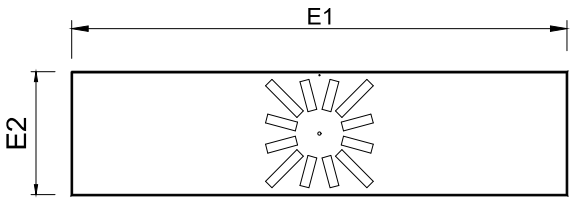
FINISHES

R9016S Painted white RAL 9016 (60-70% gloss)
R9010S Painted white RAL 9010 (60-70% gloss)
RAL... Painted in other RAL colours
…/AB/ ABS plastic vanes in white.

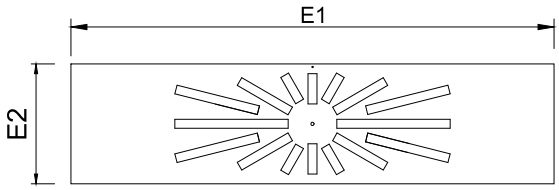
SPECIFICATION TEXT

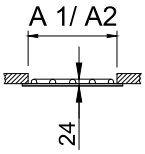
Supply and mounting of circular swirl diffuser with individually adjustable radial vanes series **AXO-C+PLXOC-R R9010S** dim. 600 constructed from galvanised steel paint in white RAL 9010 (60-70% gloss) and black ABS plastic vanes. With lateral circular connection plenum box and air flow damper in the spigot.
Manufacturer **MADEL**.

AXO-R /GC/



AXO-R /GR/





AXO-R	E1	E2	A1	A2
/GC300/ 600x300	595	295	576	276
/GR400/ 600x300				
/GC300/ 1200x300	1195	295	1176	276
/GR400/ 1200x300				
/GR500/ 1200x300				
/GR600/ 1200x300				

AXO-R

CLASSIFICATION

AXO-R Rectangular diffuser with vanes in radial arrangement.

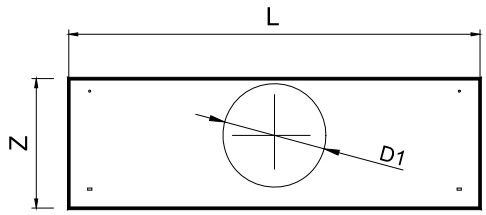
.../GC/ Vanes in circular radial arrangement.

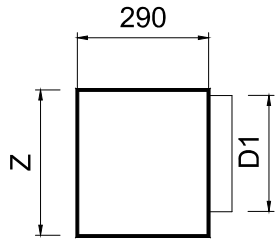
.../GR/ Vanes in rectangular radial arrangement.

MATERIAL

Diffuser constructed from galvanised steel and deflection vanes made of injected plastic, ABS type. All diffusers are provided with a seal on The back of the frame in order that the perimeter in contact with the plenum box or the ceiling is airtight.

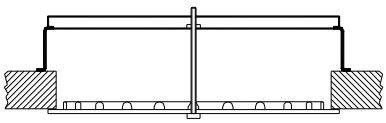
PLAR





PLAR	L	D1	Z
/GC300/	340	158	210
/GR400/	590	198	250
/GR500/	730	198	250
/GR600/	880	248	300

1)



ACCESSORIES

PLAR Plenum box with a circular connection. Made in galvanised steel.
…/L/ Upper circular connection.
…/S/ Lateral circular connection.
…-R Air flow damper in the spigot.
The AXO diffusers incorporate a vane, indicated by means of a point, that can be positioned totally in vertical to allow the access to the regulator once the diffuser is mounted.
…/AIS/ Plenum box with thermal insulation inside. Foam density 25 kg / m3 ISO 845. Thermal conductivity 10º C_0,040 W / mºK EN 12667. Classified reaction to fire B-s1, d0 EN 13501-1.

PMXO-300 Crossbar suitable for mounting in false ceiling with rectangular duct.

FIXING SYSTEMS

1) Connection into the crossbar or to the plenum box by means of central screw. Plenum box incorporates supports to hang the assembly from the ceiling with drops rods.

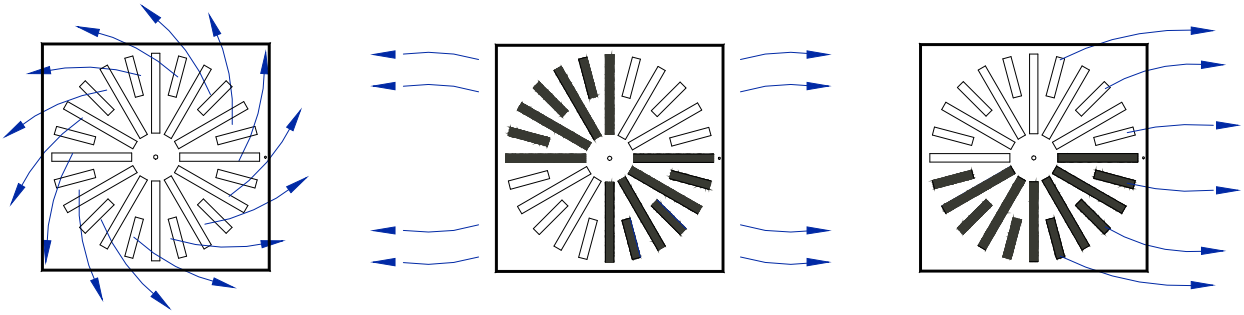
FINISHES

R9016S Painted white RAL 9016 (60-70% gloss)
R9010S Painted white RAL 9010 (60-70% gloss)
RAL... Painted in other RAL colours
…/AB/ ABS plastic vanes in white.

SPECIFICATION TEXT

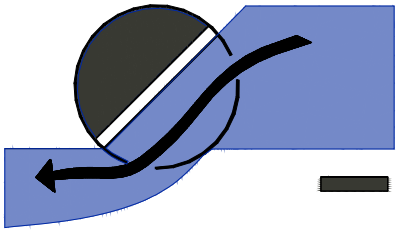
Supply and mounting of rectangular swirl diffuser with individually adjustable radial vanes series **AXO-R/GC300/+PLAR R9016S** dim. 600X300 constructed from galvanised steel paint in white R9016S (60-70% gloss) and black ABS plastic vanes. With lateral circular connection plenum box. Manufacturer **MADEL**.

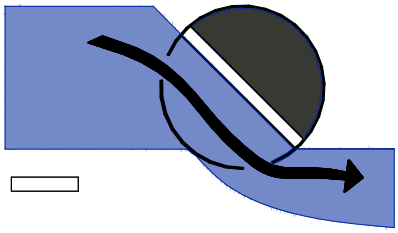
AXO series



HORIZONTAL SUPPLY.

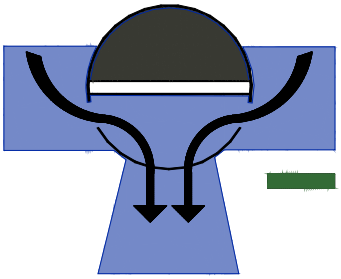
POSITION 1.



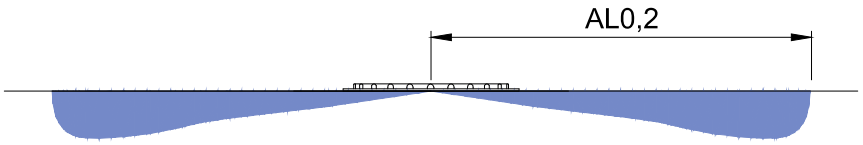


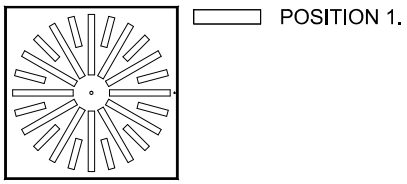
VERTICAL SUPPLY.

POSITION 2.

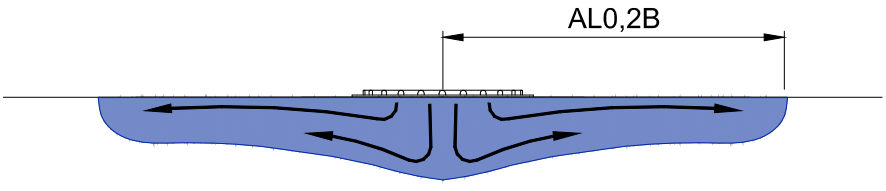


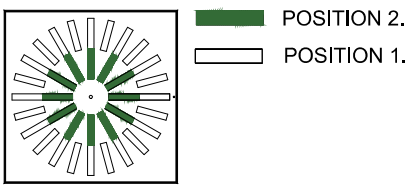
TYPE A. 100% POSITION 1.



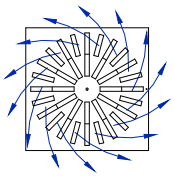


TYPE B. 50% POSITION 1 AND 50% POSITION 2.





AXO-S (Same technical data for 600, 610, 625 or 675)



RECOMMENDED VELOCITY.

AXO-S	Vmin m/s	Vmax m/s
300	2.5	6,5
400	2.5	5,9
500	2.5	5,4
600	2.5	5,3
800	2.5	4,2

FREE FACE AREA (m2).

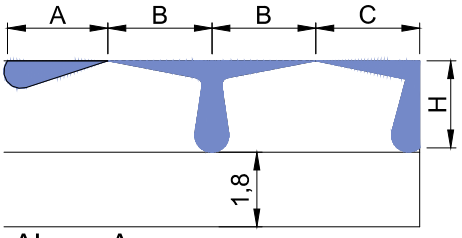
AXO-S	Afree m2	Qmin. m3/h	Qmax. m3/h
300	.0096	87	225
400	.0201	181	430
500	.029	261	565
600	.044	396	845
800	.068	612	1025

CORRECTION FACTOR FOR DPt AND Lwa1.

BOXSTAR-R		100% Open	50% Open	10% Open
300	Dpt (Kp)	1	1,2	2,4
	Lwa1 (Kf)	+0,7	+1,1	+2,4
400	Dpt (Kp)	1	1,2	2,3
	Lwa1 (Kf)	+0,8	+1,5	+2,9
500	Dpt (Kp)	1	1,4	4
	Lwa1 (Kf)	+0,8	+2,1	+2,8
600	Dpt (Kp)	1	1,5	4,8
	Lwa1 (Kf)	+0,9	+5,8	+7,7
800	Dpt (Kp)	1	1,7	4,5
	Lwa1 (Kf)	+0,9	+3,6	+5,2

DPt1 = Kp x DPt

Lwa = Lwa1 + Kf

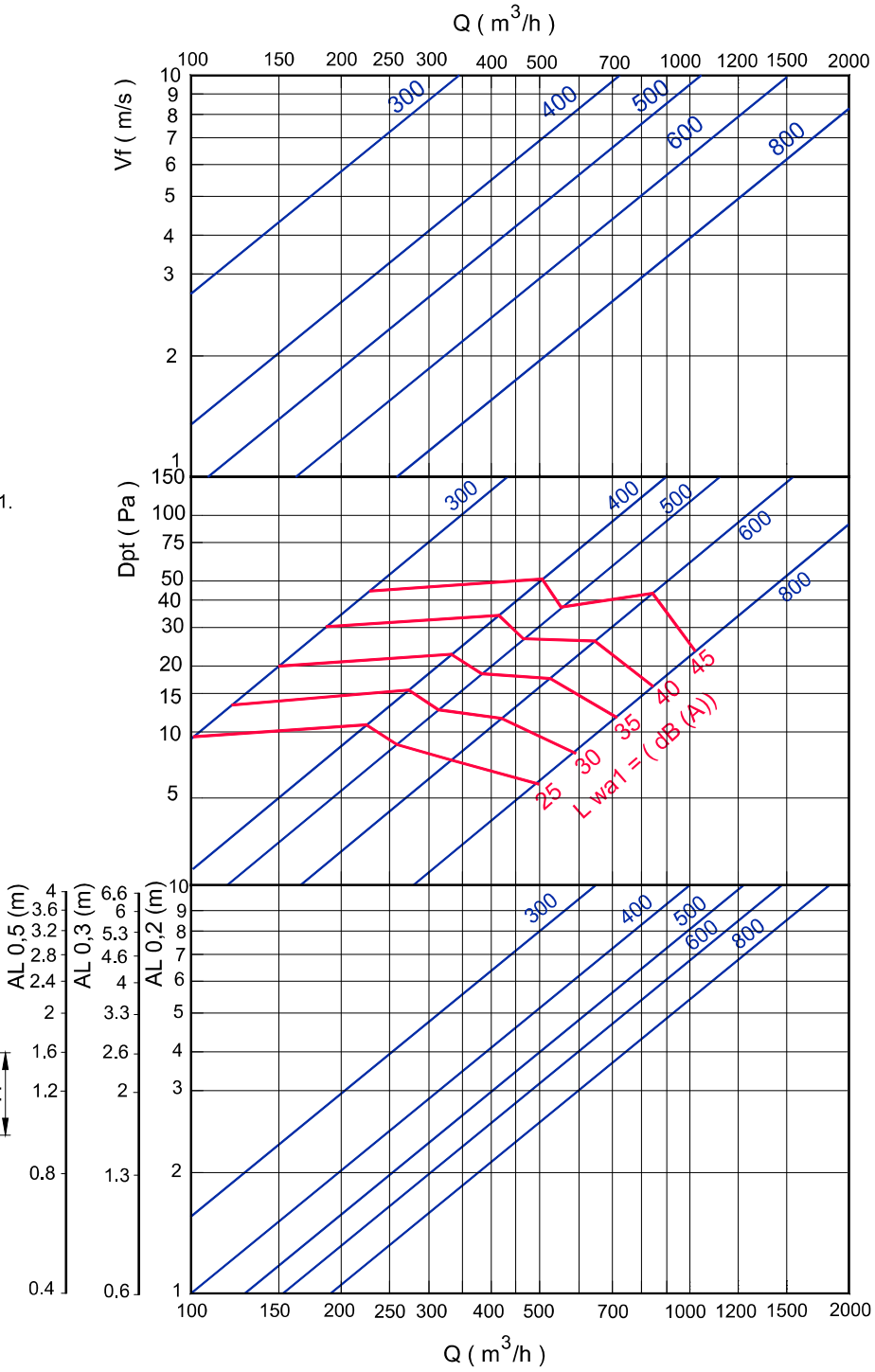


$AL_{0.2}$ = A

$AL_{0.2}$ = B+H

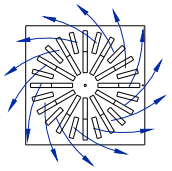
$AL_{0.2}$ = C+H

FREE VELOCITY, PRESSURE LOSS AND SOUND POWER LEVEL, THROW WITH CEILING EFFECT.

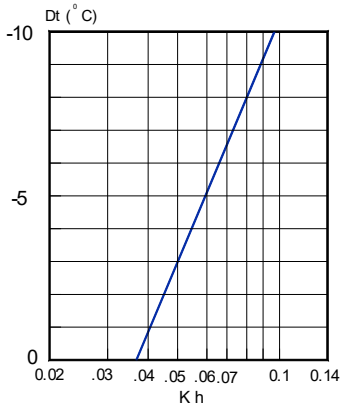


Note: In MadelMedia Octava band centre frequency in Hz.

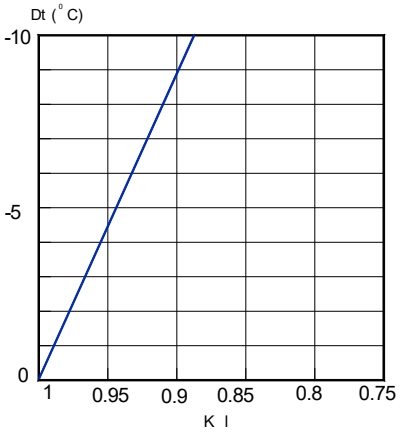
AXO-S (Same technical data for 600, 610, 625 or 675)



CORRECTION FACTOR FOR VERTICAL DIFFUSION (bV) FOR DT (-).

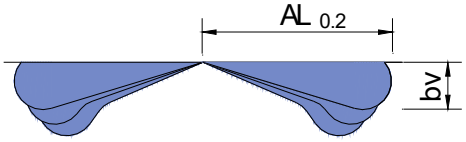


CORRECTON FACTOR FOR THROW (L0.2) DT (-).



Kh = Correction factor for the vertical diffusion.

Kl = Correction factor for the throw.

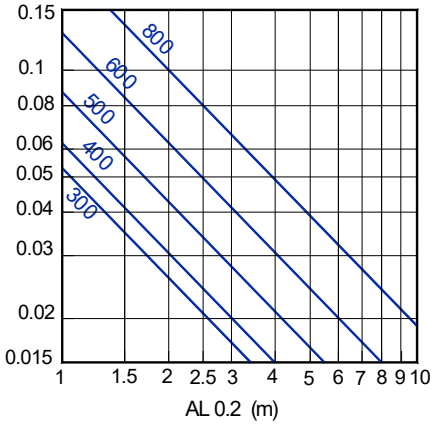


$bv = Kh \times AL_{0.2}$

$AL'_{0.2} (Dt<0) = Kl \times AL_{0.2}$

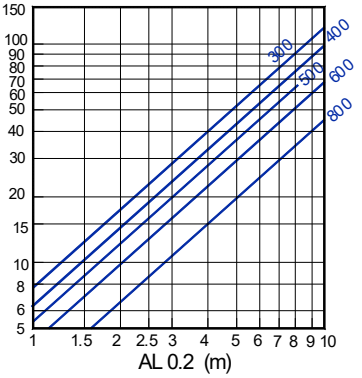
TEMPERATURE RATIO.

$$\frac{Dtl}{Dtz} = \frac{t\ room - t\ x}{t\ room - t\ supply}$$

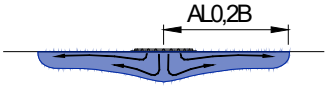


INDUCTION RATIO.

$$i = \frac{Qr}{Q_0} = \frac{Q\ total\ at\ x}{Q\ of\ supply}$$



TYPE B. 50% POSITION 1 AND 50% POSITION 2.



$$i = \frac{Qr}{Q_0} = \frac{Q\ total\ at\ x}{Q\ of\ supply}$$

CORRECTION FACTOR FOR THROW TYPE B.

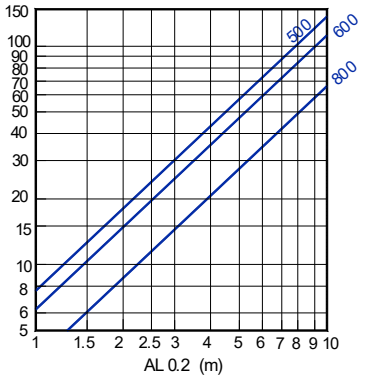
AXO-S	KB
500	0,75
600	0,74
800	0,7

AL0,2B = KB * AL0,2

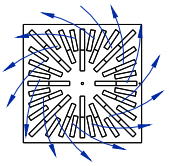
EXAMPLE:

AXO-S-600
Q = 600 m3/h
AL0,2 = 4 m
AL0,2B = 0,74 * 4 = 2,96 m
i = 28

INDUCTION RATIO. TYPE B.



AXO-SX (Same technical data for 600, 610, 625 or 675)



RECOMMENDED VELOCITY.

AXO-SX	Vmin m/s	Vmax m/s
	2.5	6,5
	2.5	6,9
	2.5	5,6
	2.5	4,2
	2.5	3,9

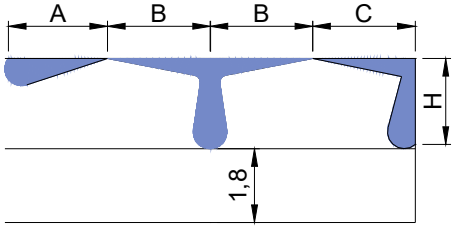
FREE FACE AREA (m2).

AXO-SX	Afree m2	Qmin. m3/h	Qmax. m3/h
300	.0112	101	263
400	.024	216	598
500	.032	288	652
600	.058	522	880
800	.079	711	1110

CORRECTION FACTOR FOR DPt AND Lwa1.

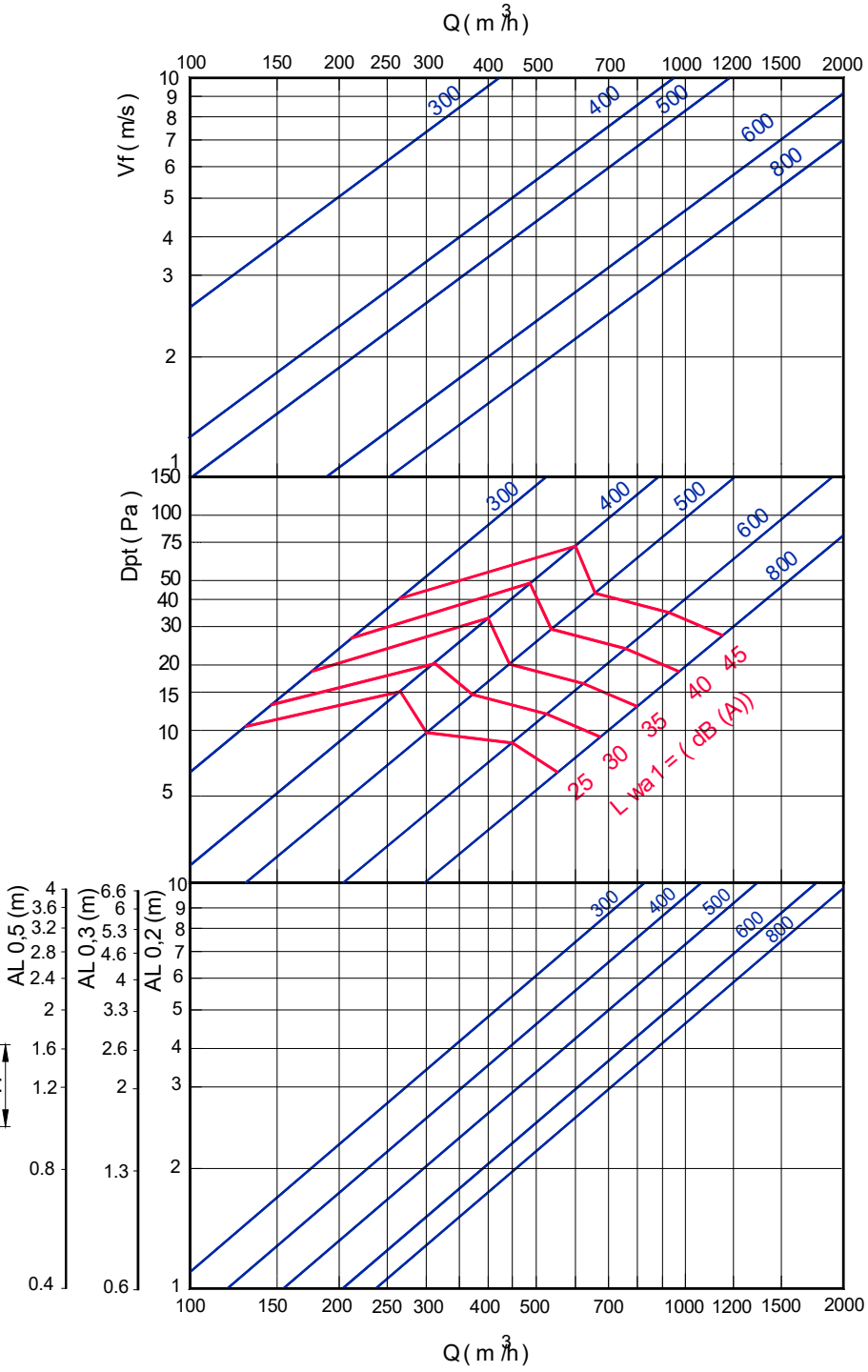
BOXSTAR-R		100% Open	50% Open	10% Open
	Dpt (Kp)	1	1,2	2,4
	Lwa1 (Kf)	+0,8	+1,5	+1,1
	Dpt (Kp)	1	1,2	2,6
	Lwa1 (Kf)	+0,8	+2,1	+2
	Dpt (Kp)	1	1,4	4
	Lwa1 (Kf)	+0,9	+2	+1
	Dpt (Kp)	1	1,5	4,8
	Lwa1 (Kf)	+0,8	+4,8	+5,2
	Dpt (Kp)	1	1,8	4,5
	Lwa1 (Kf)	+0,9	+3,6	+2,7

DPt1 = Kp x DPt
Lwa = Lwa1 + Kf



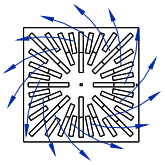
AL 0=A
AL 0=B+H
AL 0=C+H

FREE VELOCITY, PRESSURE LOSS AND SOUND POWER LEVEL, THROW WITH CEILING EFFECT.

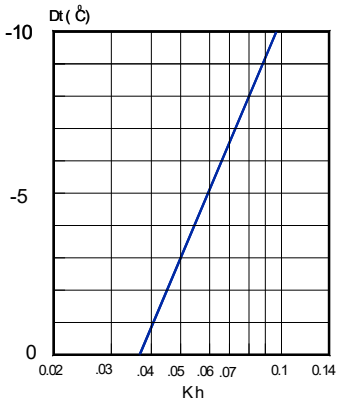


Note: In MadelMedia Octava band centre frequency in Hz.

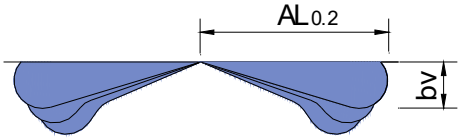
AXO-SX (Same technical data for 600, 610, 625 or 675)



CORRECTION FACTOR FOR VERTICAL DIFFUSION (bV) FOR DT (-).

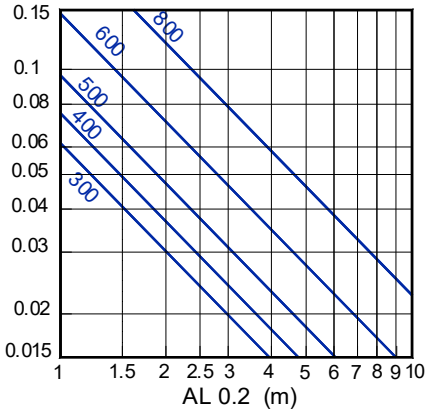


Kh = Correction factor for the vertical diffusion.

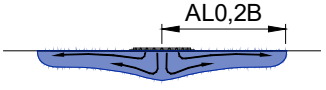


TEMPERATURE RATIO.

$$\frac{Dtl}{Dtz} = \frac{t\ room - t\ x}{t\ room - t\ supply}$$



TYPE B. 50% POSITION 1 AND 50% POSITON 2.



CORRECTION FACTOR FOR THROW TYPE B.

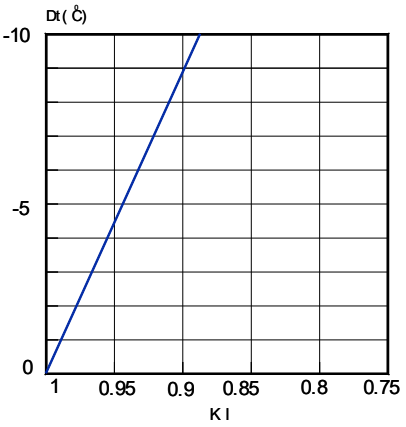
AXO-SX	KB
400	0,75
500	0,65
600	0,6
800	0,65

$$i = \frac{Qr}{Q_0} = \frac{Q\ total\ at\ x}{Q\ of\ supply.}$$

AL0,2B = KB * AL0,2

EXAMPLE:
AXO-SX-800
Q = 800 m3/h
AL0,2 = 4,25 m
AL0,2B = 0,6 * 4,25 = 2,55 m
i = 28

CORRECTON FACTOR FOR THROW (L0.2) DT (-)



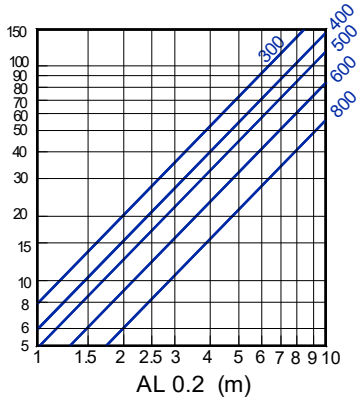
KI = Correction factor for the throw.

bv = Kh x AL 0.2

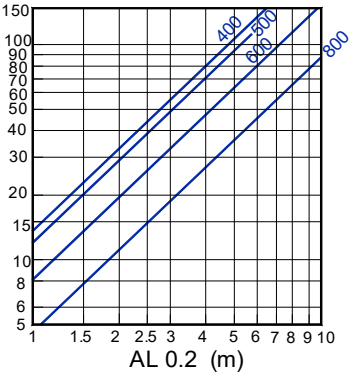
AL´0.2 (Dt <0)= KI x AL 0.2

INDUCTION RATIO.

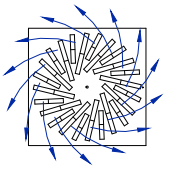
$$i = \frac{Qr}{Q_0} = \frac{Q\ total\ at\ x}{Q\ of\ supply.}$$



INDUCTION RATIO. TYPE B.



AXO-SY (Same technical data for 600, 610, 625 or 675)



RECOMMENDED VELOCITY.

AXO-SY	Vmin m/s	Vmax m/s
300	2.5	6,6
400	2.5	6,8
500	2.5	6,1
600	2.5	5,3
800	2.5	4,5

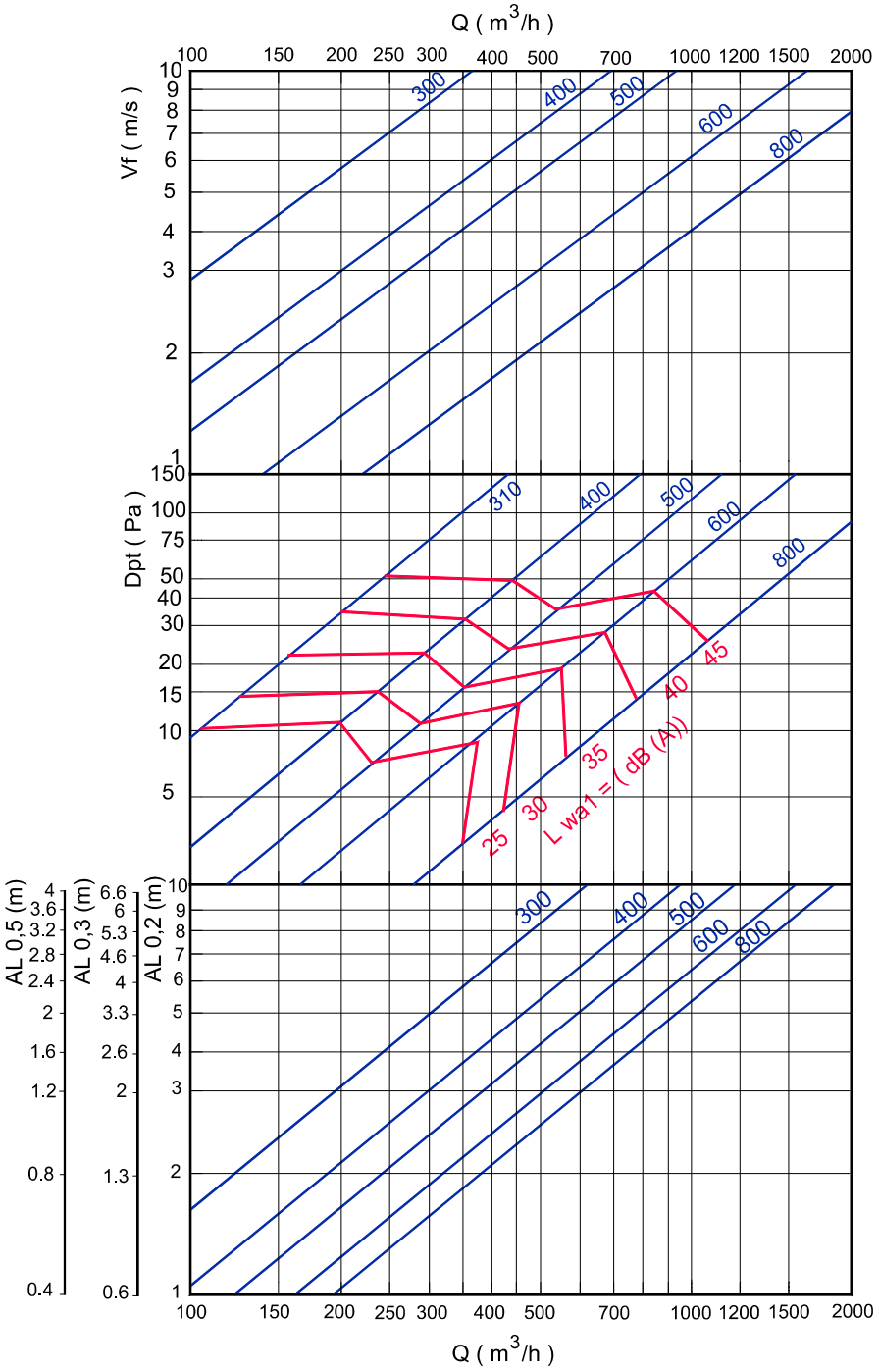
FREE FACE AREA (m2).

AXO-SY	Afree m2	Qmin. m3/h	Qmax. m3/h
300	.01	90	240
400	.0181	163	445
500	.025	225	555
600	.044	387	840
800	.068	612	1105

CORRECTION FACTOR FOR DPt AND Lwa1.

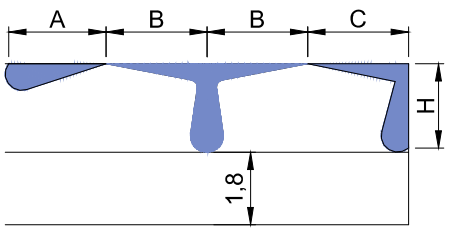
BOXSTAR-R		100% Open	50% Open	10% Open
300	Dpt (Kp)	1	1,2	2,4
	Lwa1 (Kf)	+0,8	+1,4	+0,2
400	Dpt (Kp)	1	2	2,3
	Lwa1 (Kf)	+0,8	+2,2	+1,9
500	Dpt (Kp)	1	1,4	4
	Lwa1 (Kf)	+0,8	+2,1	+1,7
600	Dpt (Kp)	1	1,5	4,8
	Lwa1 (Kf)	+0,9	+5,1	+7
800	Dpt (Kp)	1	1,7	4,5
	Lwa1 (Kf)	+0,9	+4,7	+7,7

FREE VELOCITY, PRESSURE LOSS AND SOUND POWER LEVEL, THROW WITH CEILING EFFECT.



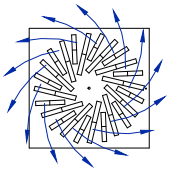
Note: In MadelMedia Octava band centre frequency in Hz.

DPt1 = Kp x DPt
Lwa = Lwa1 + Kf

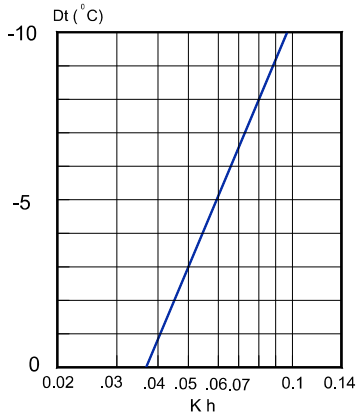


$AL_{0.2}$ = A
$AL_{0.2}$ = B+H
$AL_{0.2}$ = C+H

AXO-SY (Same technical data for 600, 610, 625 or 675)

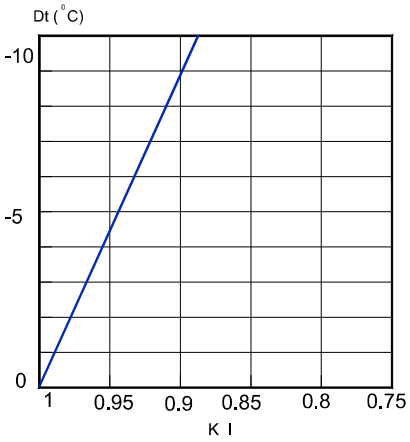


CORRECTION FACTOR FOR VERTICAL DIFFUSION (bV) FOR DT (-).



Kh = Correction factor for the vertical diffusion.

CORRECTON FACTOR FOR THROW (L0.2) DT (-).



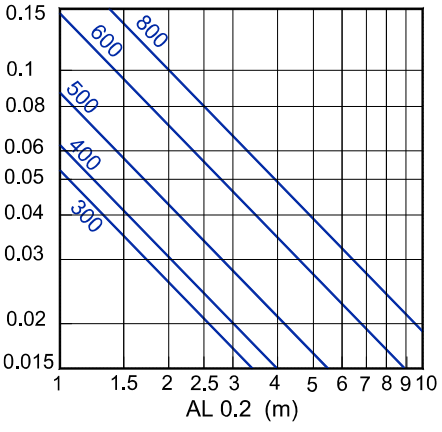
KI = Correction factor for the throw.

bv = Kh x AL 0.2

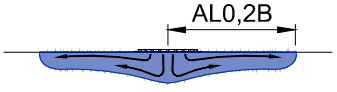
AL´0.2 (Dt <0)= KI x AL 0.2

TEMPERATURE RATIO.

$$\frac{DtI}{Dtz} = \frac{t\ room - t\ x}{t\ room - t\ supply}$$



TYPE B. 50% POSITION 1 AND 50% POSITION 2.

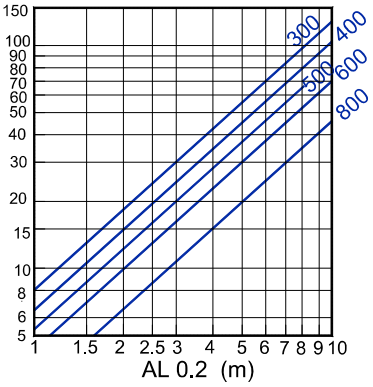


CORRECTION FACTOR FOR THROW TYPE B.

AXO-SY	KB
500	0,75
600	0,75
800	0,7

INDUCTION RATIO.

$$i = \frac{Qr}{Q_0} = \frac{Q\ total\ at\ x}{Q\ of\ supply.}$$

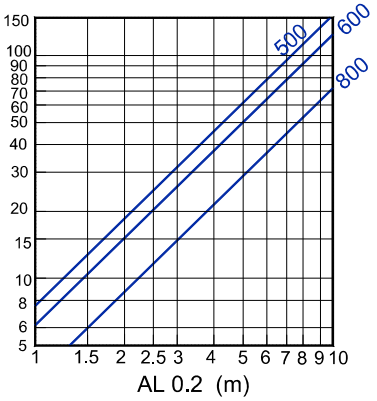


INDUCTION RATIO. TYPE B.

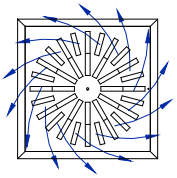
$$i = \frac{Qr}{Q_0} = \frac{Q\ total\ at\ x}{Q\ of\ supply.}$$

AL0,2B = KB *AL0,2

EXAMPLE:
AXO-SY-600
Q = 600 m3/h
AL0,2 = 4 m
AL0,2B = 0,74 * 4 = 3 m
i = 27



AXO-KLIN (Same technical data for 600, 610, 625 or 675)



RECOMMENDED VELOCITY.

AXO-S KLIN	Vmin m/s	Vmax m/s
400	2.5	5,9
500	2.5	5,4
600	2.5	5,3

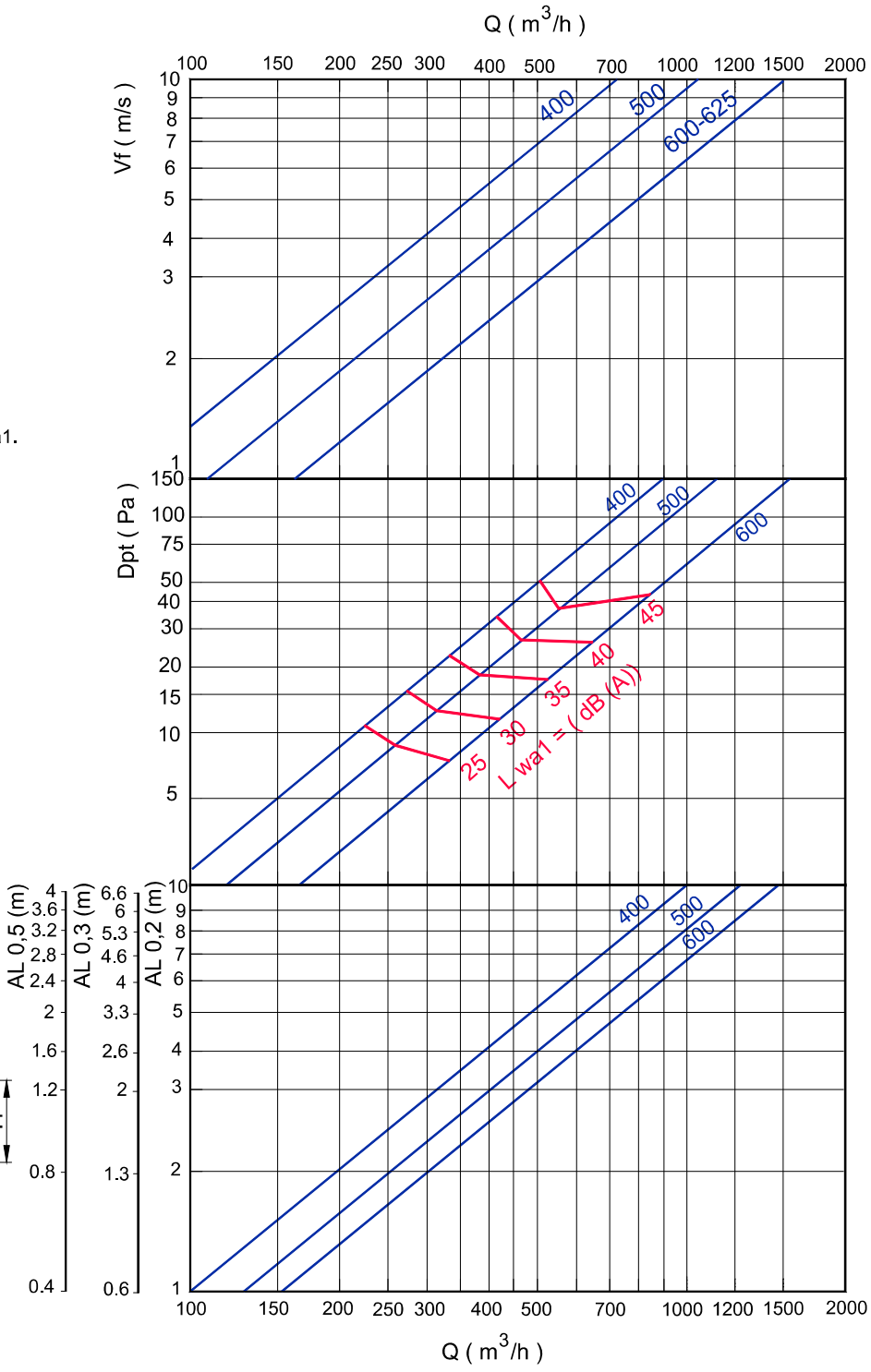
FREE FACE AREA (m2).

AXO-S KLIN	Afree m2	Qmin. m3/h	Qmax. m3/h
400	.0201	181	430
500	.029	261	565
600	.044	396	845

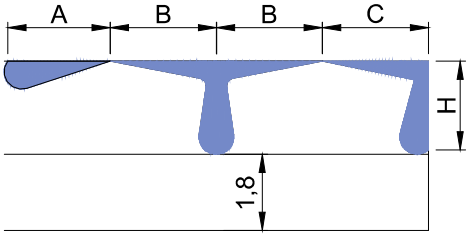
CORRECTION FACTOR FOR DPt AND Lwa1.

		100% Open	50% Open	10% Open
400	Dpt (Kp)	1	1,2	2,3
	Lwa1 (Kf)	+0,8	+1,5	+2,9
500	Dpt (Kp)	1	1,4	4
	Lwa1 (Kf)	+0,8	+2,1	+2,8
600	Dpt (Kp)	1	1,5	4,8
	Lwa1 (Kf)	+0,9	+5,8	+7,7

FREE VELOCITY, PRESSURE LOSS AND SOUND POWER LEVEL, THROW WITH CEILING EFFECT.



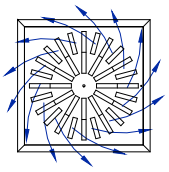
DPt1 = Kp x DPt
Lwa = Lwa1 + Kf



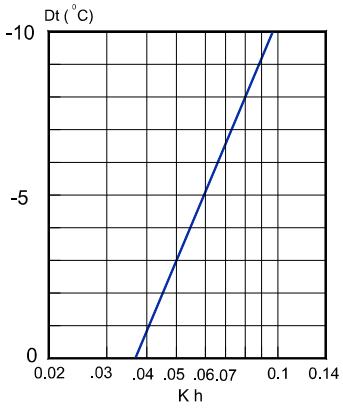
$AL_{0.2}$ = A
$AL_{0.2}$ = B+H
$AL_{0.2}$ = C+H

Note: In MadelMedia Octava band centre frequency in Hz.

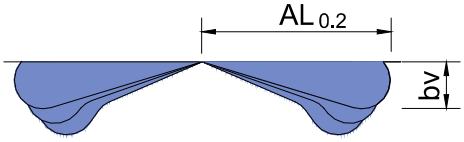
AXO-KLIN (Same technical data for 600, 610, 625 or 675)



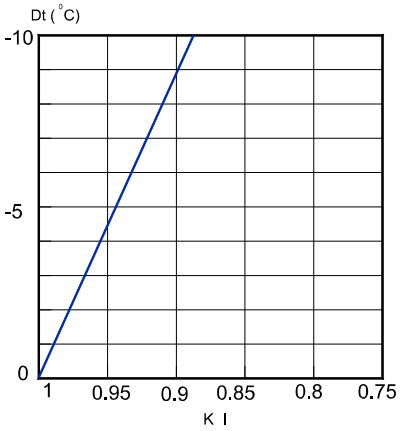
CORRECTION FACTOR FOR VERTICAL DIFFUSION (bV) FOR DT (-).



Kh = Correction factor for the vertical diffusion.



CORRECTON FACTOR FOR THROW (L0.2) DT (-).



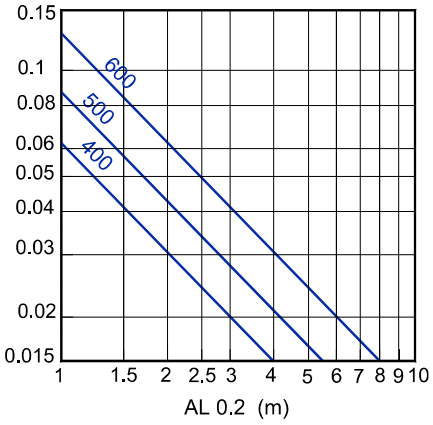
Kl = Correction factor for the throw.

$bv = Kh \times AL_{0.2}$

$AL'_{0.2}(Dt<0) = Kl \times AL_{0.2}$

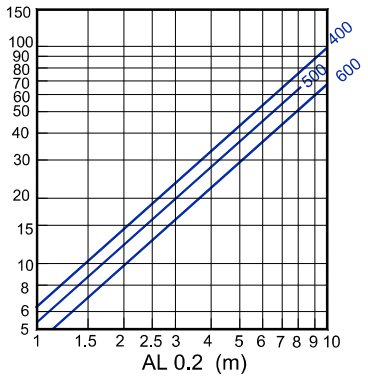
TEMPERATURE RATIO.

$$\frac{Dtl}{Dtz} = \frac{t\ room - t\ x}{t\ room - t\ supply}$$

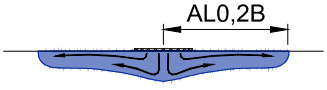


INDUCTION RATIO.

$$i = \frac{Qr}{Q_0} = \frac{Q\ total\ at\ x}{Q\ of\ supply.}$$



TYPE B. 50% POSITION 1 AND 50% POSITION 2.



$$i = \frac{Qr}{Q_0} = \frac{Q\ total\ at\ x}{Q\ of\ supply.}$$

CORRECTION FACTOR FOR THROW TYPE B.

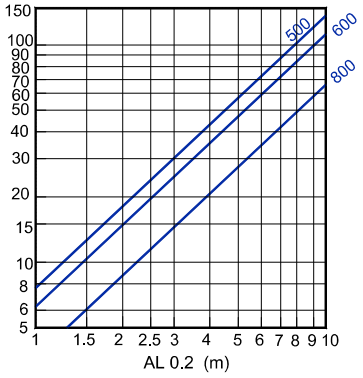
AXO-S KLIN	KB
500	0,75
600	0,74

AL0,2B = KB * AL0,2

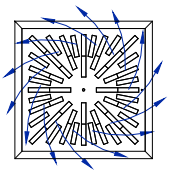
EXAMPLE:

AXO-S-KLIN-600-625
Q = 600 m3/h
AL0,2 = 4 m
AL0,2B = 0,74 * 4 = 2,96 m
i = 28

INDUCTION RATIO. TYPE B.



AXO-KLIN (Same technical data for 600, 610, 625 or 675)



RECOMMENDED VELOCITY.

AXO-SX KLIN	Vmin m/s	Vmax m/s
400	2.5	6,9
500	2.5	5,6
600	2.5	4,2

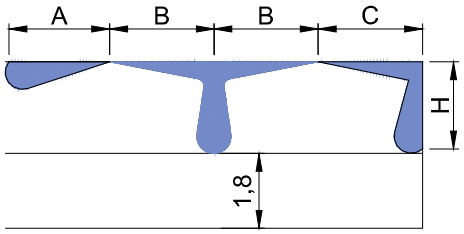
FREE FACE AREA (m2).

AXO-SX KLIN	Afree m2	Qmin. m3/h	Qmax. m3/h
400	.024	216	598
500	.032	288	652
600	.058	522	880

CORRECTION FACTOR FOR DPt AND Lwa1.

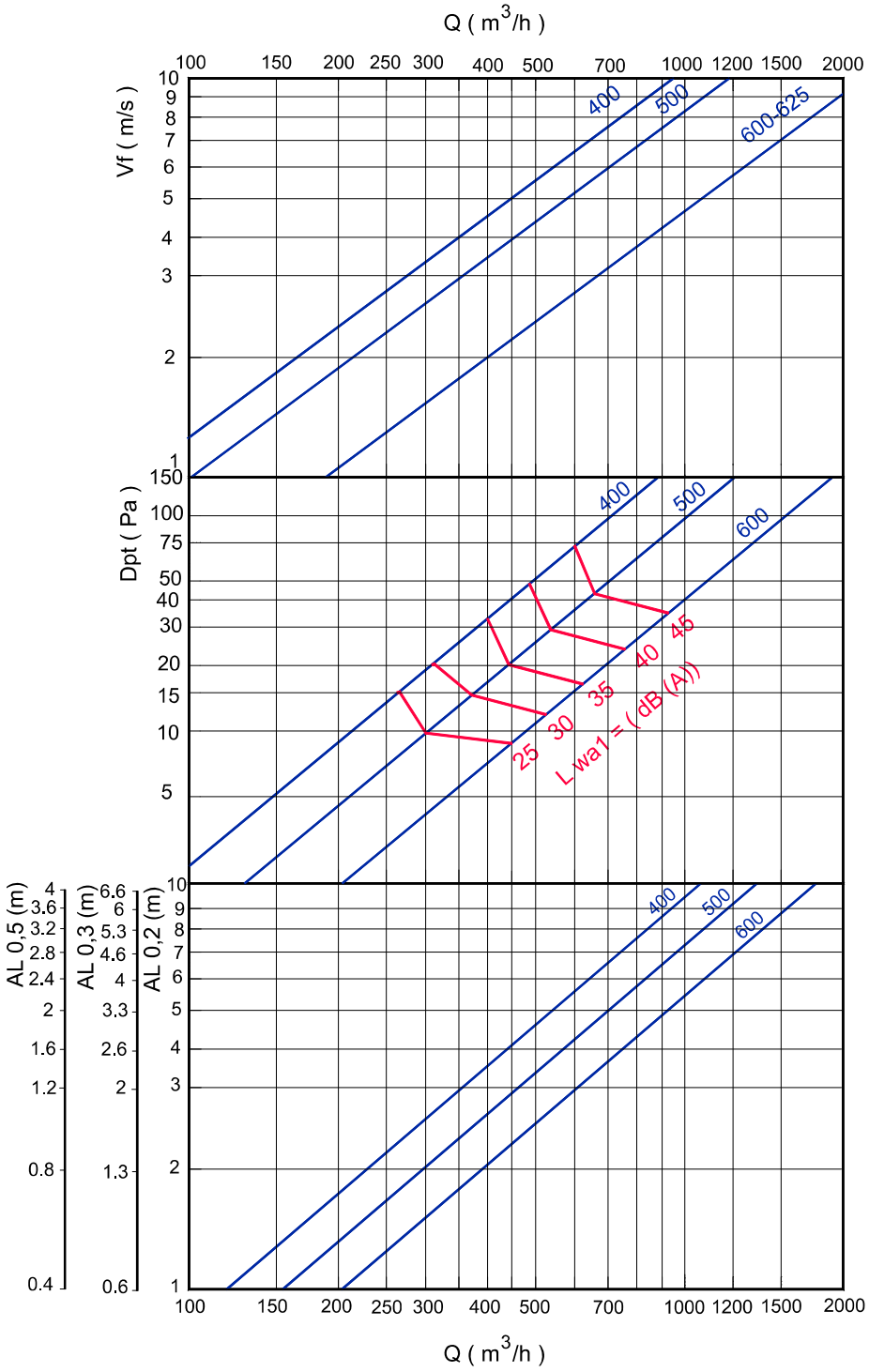
		100% Open	50% Open	10% Open
400	Dpt (Kp)	1	1,2	2,6
	Lwa1 (Kf)	+0,8	+2,1	+2
500	Dpt (Kp)	1	1,4	4
	Lwa1 (Kf)	+0,9	+2	+1
600	Dpt (Kp)	1	1,5	4,8
	Lwa1 (Kf)	+0,8	+4,8	+5,2

DPt1 = Kp x DPt
Lwa = Lwa1 + Kf



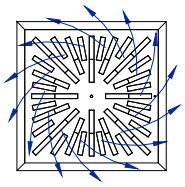
$AL_{0.2}$ = A
$AL_{0.2}$ = B+H
$AL_{0.2}$ = C+H

FREE VELOCITY, PRESSURE LOSS AND SOUND POWER LEVEL, THROW WITH CEILING EFFECT.

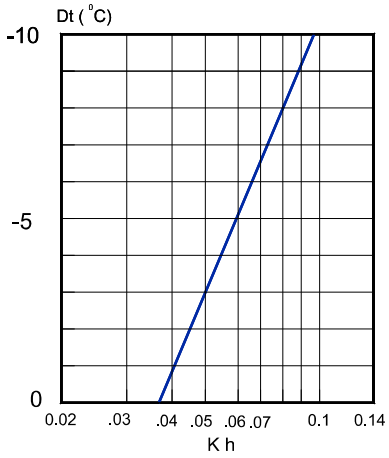


Note: In MadelMedia Octava band centre frequency in Hz.

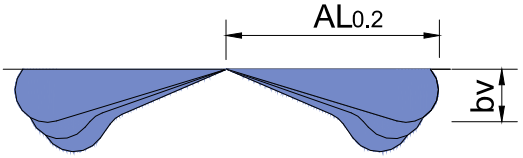
AXO-KLIN (Same technical data for 600, 610, 625 or 675)



CORRECTION FACTOR FOR VERTICAL DIFFUSION (bV) FOR DT (-).

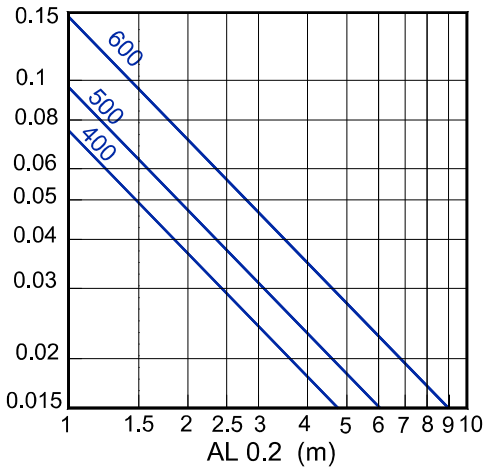


Kh = Correction factor for the vertical diffusion.

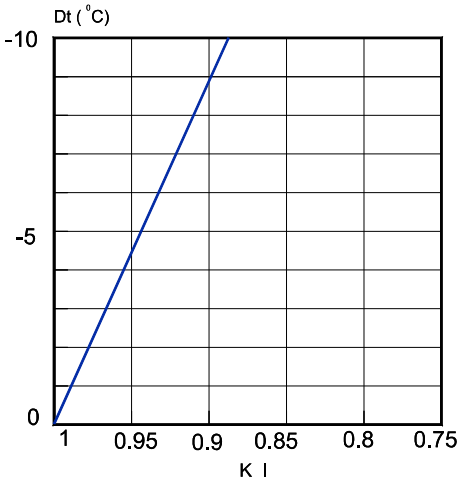


TEMPERATURE RATIO.

$$\frac{Dtl}{Dtz} = \frac{t\ room\ -\ t\ x}{t\ room - t\ supply}$$



CORRECTON FACTOR FOR THROW (L0.2) DT (-).



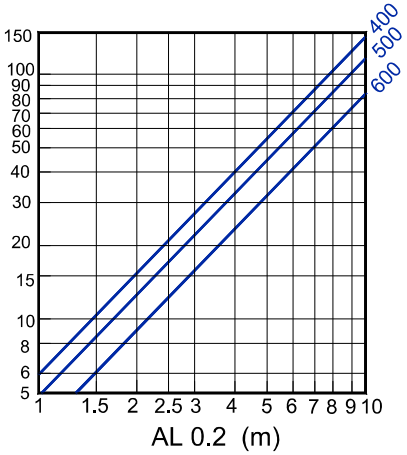
Kl = Correction factor for the throw.

$bv = Kh \times AL_{0.2}$

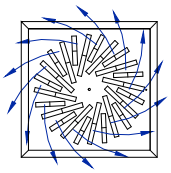
$AL'_{0.2}\ (Dt<0) = Kl \times AL_{0.2}$

INDUCTION RATIO.

$$i = \frac{Qr}{Q_0} = \frac{Q\ total\ at\ x}{Q\ of\ supply.}$$



AXO-KLIN (Same technical data for 600, 610, 625 or 675)



RECOMMENDED VELOCITY.

AXO-SY KLIN	Vmin m/s	Vmax m/s
400	2.5	6,8
500	2.5	6,1
600	2.5	5,3

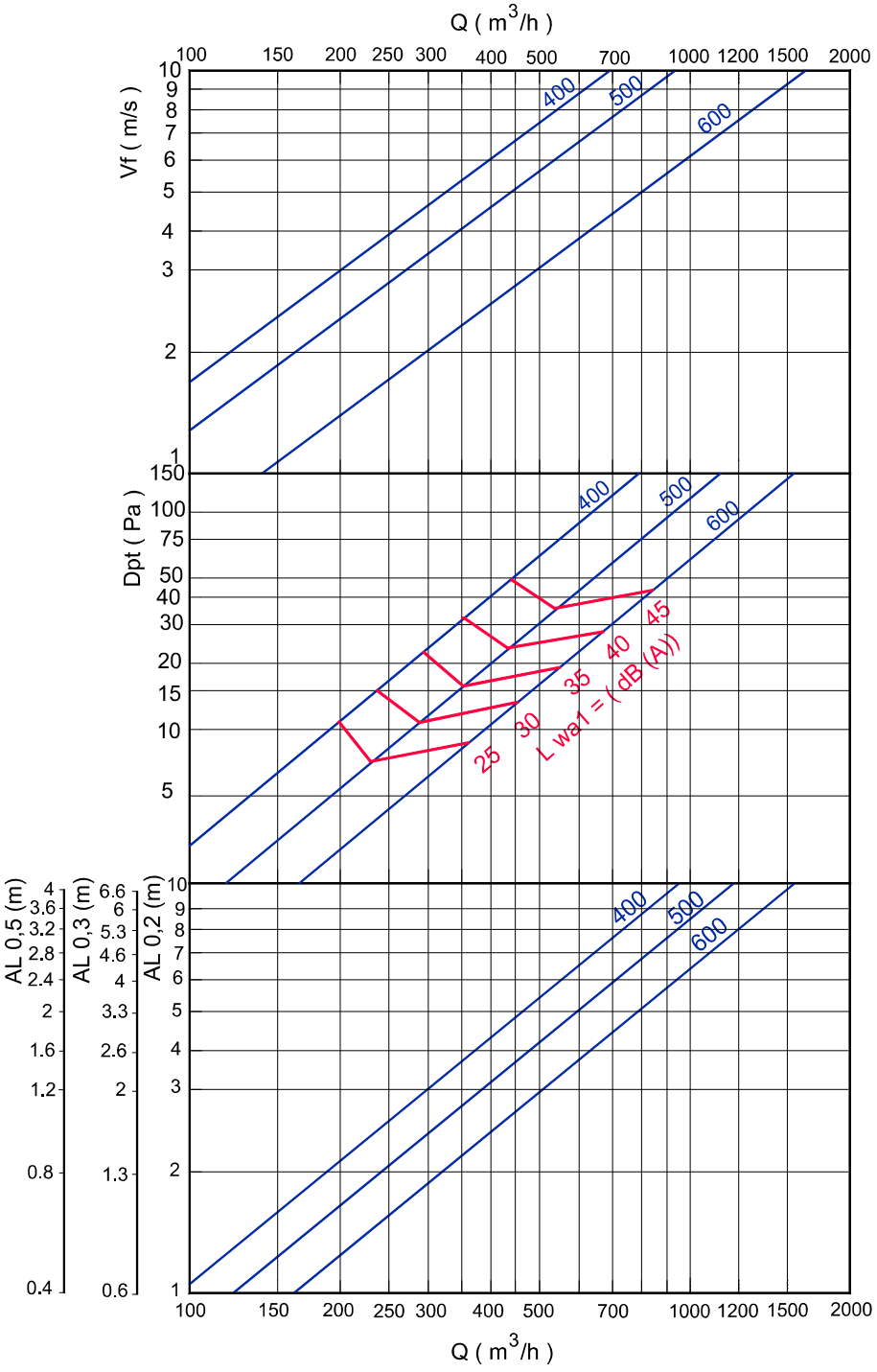
FREE FACE AREA (m2).

AXO-SY KLIN	Afree m2	Qmin. m3/h	Qmax. m3/h
400	.0181	163	445
500	.025	225	555
600	.044	387	840

CORRECTION FACTOR FOR DPt AND Lwa1.

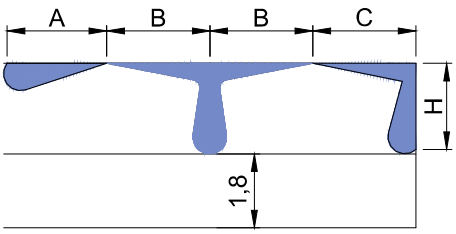
		100% Open	50% Open	10% Open
400	Dpt (Kp)	1	2	2,3
	Lwa1 (Kf)	+0,8	+2,2	+1,9
500	Dpt (Kp)	1	1,4	4
	Lwa1 (Kf)	+0,8	+2,1	+1,7
600	Dpt (Kp)	1	1,5	4,8
	Lwa1 (Kf)	+0,9	+5,1	+7

FREE VELOCITY, PRESSURE LOSS AND SOUND POWER LEVEL, THROW WITH CEILING EFFECT.



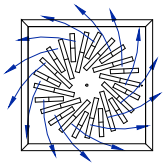
Note: In MadelMedia Octava band centre frequency in Hz.

DPt1 = Kp x DPt
Lwa = Lwa1 + Kf

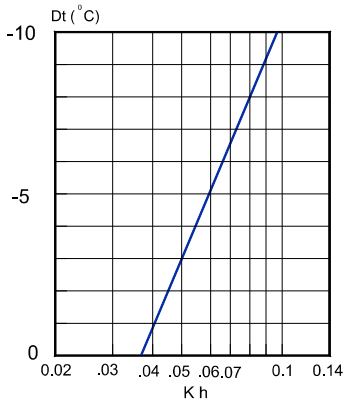


$AL_{0.2}$ = A
$AL_{0.2}$ = B+H
$AL_{0.2}$ = C+H

AXO-KLIN (Same technical data for 600, 610, 625 or 675)

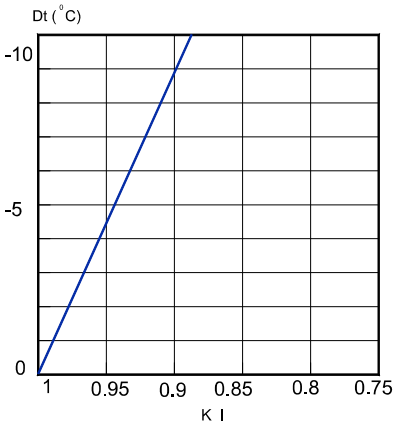


CORRECTION FACTOR FOR VERTICAL DIFFUSION (bV) FOR DT (-).



Kh = Correction factor for the vertical diffusion.

CORRECTON FACTOR FOR THROW (L0.2) DT (-).



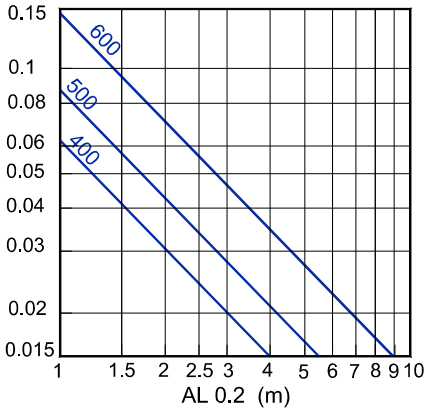
Kl = Correction factor for the throw.

$bv = Kh \times AL_{0.2}$

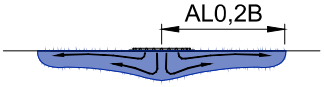
$AL'_{0.2}\ (Dt<0) = Kl \times AL_{0.2}$

TEMPERATURE RATIO.

$$\frac{Dtl}{Dtz} = \frac{t\ room - t\ x}{t\ room - t\ supply}$$



TYPE B. 50% POSITION 1 AND 50% POSITION 2.

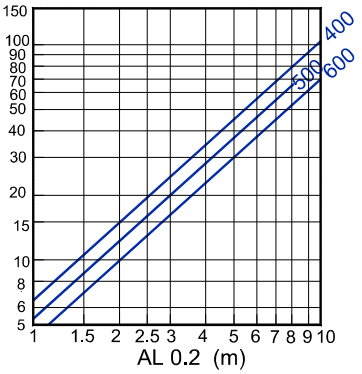


CORRECTION FACTOR FOR THROW TYPE B.

	KB
500	0,75
600-625	0,75

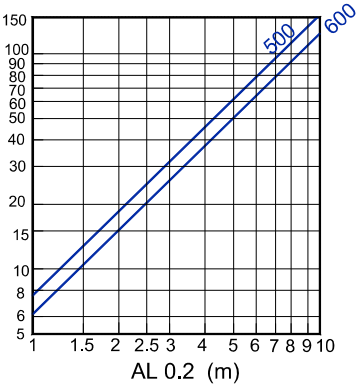
INDUCTION RATIO.

$$i = \frac{Qr}{Q_0} = \frac{Q\ total\ at\ x}{Q\ of\ supply.}$$



INDUCTION RATIO. TYPE B.

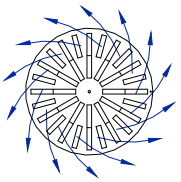
$$i = \frac{Qr}{Q_0} = \frac{Q\ total\ at\ x}{Q\ of\ supply.}$$



AL0,2B = KB *AL0,2

EXAMPLE:
AXO-SY-KLIN-600-625
Q = 600 m3/h
AL0,2 = 4 m
AL0,2B = 0,74 * 4 = 3 m
i = 27

AXO-C



RECOMMENDED VELOCITY.

AXO-C	Vmin m/s	Vmax m/s
300	2.5	6,5
400	2.5	5,9
500	2.5	5,4
625	2.5	5,3
825	2.5	4,2

FREE FACE AREA (m2).

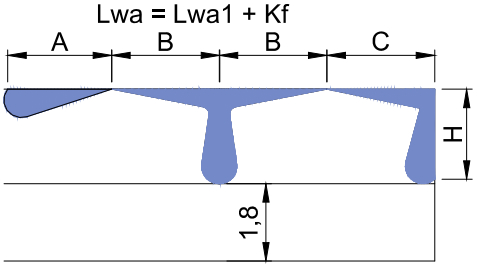
AXO-C	Afree m2	Qmin. m3/h	Qmax. m3/h
300	.0096	87	225
400	.0201	181	430
500	.029	261	565
625	.044	396	845
825	.068	612	1025

CORRECTION FACTOR FOR DPt AND Lwa1.

		100% Open	50% Open	10% Open
300	Dpt (Kp)	1	1,2	2,4
	Lwa1 (Kf)	+0,7	+1,1	+2,4
400	Dpt (Kp)	1	1,2	2,3
	Lwa1 (Kf)	+0,8	+1,5	+2,9
500	Dpt (Kp)	1	1,4	4
	Lwa1 (Kf)	+0,8	+2,1	+2,8
625	Dpt (Kp)	1	1,5	4,8
	Lwa1 (Kf)	+0,9	+5,8	+7,7
825	Dpt (Kp)	1	1,7	4,5
	Lwa1 (Kf)	+0,9	+3,6	+5,2

DPt1 = Kp x DPt

Lwa = Lwa1 + Kf

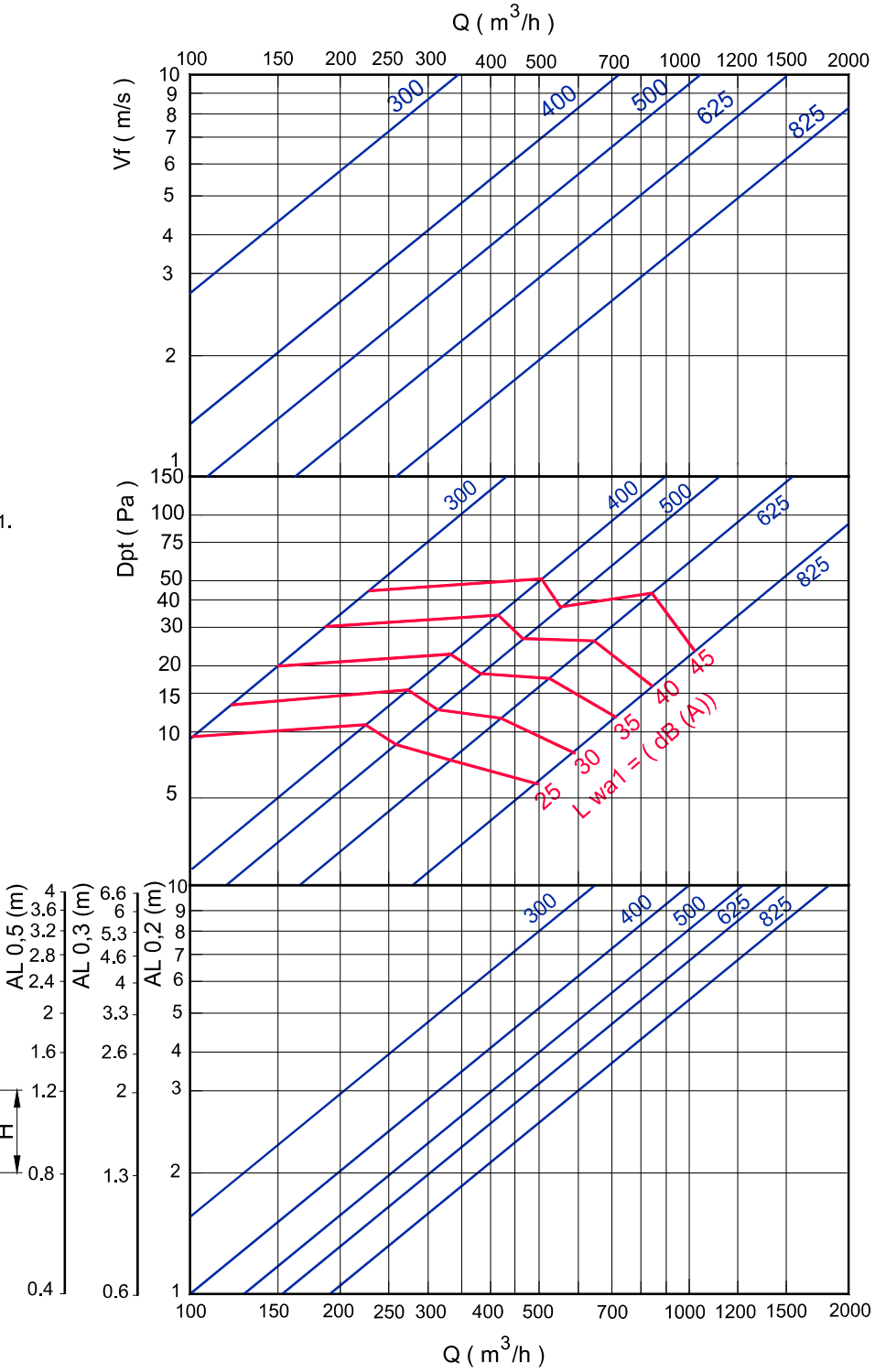


$AL_{0.2}$ = A

$AL_{0.2}$ = B+H

$AL_{0.2}$ = C+H

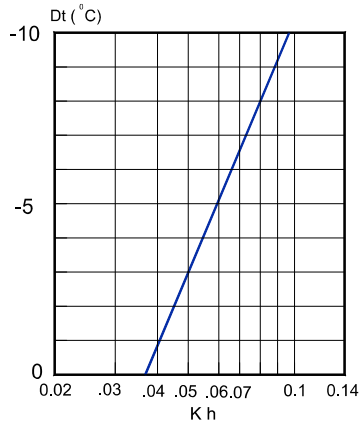
FREE VELOCITY, PRESSURE LOSS AND SOUND POWER LEVEL, THROW WITH CEILING EFFECT.



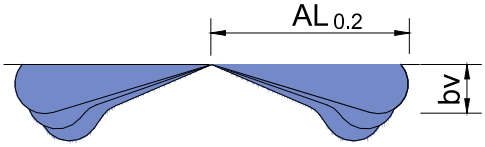
Note: In MadelMedia Octava band centre frequency in Hz.

AXO-C

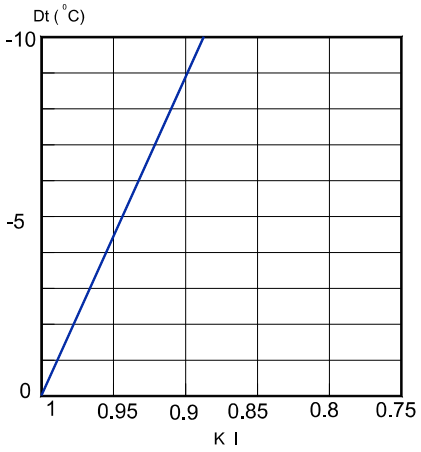
CORRECTION FACTOR FOR VERTICAL DIFFUSION (bV) FOR DT (-).



Kh = Correction factor for the vertical diffusion.



CORRECTON FACTOR FOR THROW (L0.2) DT (-).



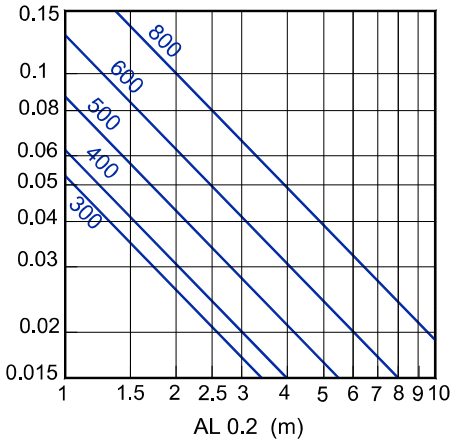
Kl = Correction factor for the throw.

$$bv = Kh \times AL_{0.2}$$

$$AL'_{0.2}\ (Dt<0) = Kl \times AL_{0.2}$$

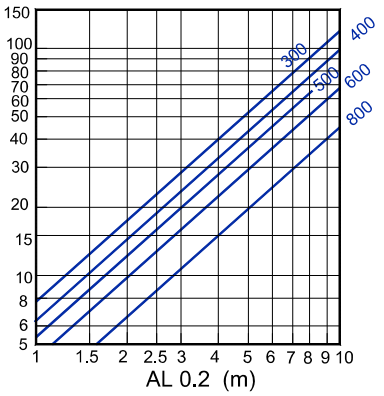
TEMPERATURE RATIO.

$$\frac{Dtl}{Dtz} = \frac{t\ room - t\ x}{t\ room - t\ supply}$$

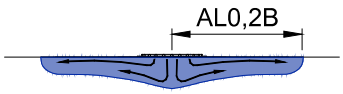


INDUCTION RATIO.

$$i = \frac{Qr}{Q_0} = \frac{Q\ total\ at\ x}{Q\ of\ supply.}$$



TYPE B. 50% POSITION 1 AND 50% POSITION 2.



$$i = \frac{Qr}{Q_0} = \frac{Q\ total\ at\ x}{Q\ of\ supply.}$$

AL0,2B = KB * AL0,2

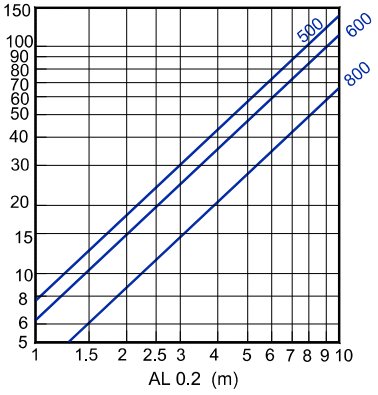
EXAMPLE:

AXO-C-600
Q = 600 m3/h
AL0,2 = 4 m
AL0,2B = 0,74 * 4 = 2,96 m
i = 28

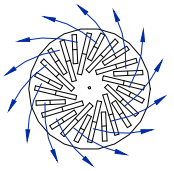
CORRECTION FACTOR FOR THROW TYPE B.

	KB
500	0,75
625	0,74
825	0,7

INDUCTION RATIO. TYPE B.



AXO-CY



RECOMMENDED VELOCITY.

AXO-CY	Vmin m/s	Vmax m/s
300	2.5	6,6
400	2.5	6,8
500	2.5	6,1
625	2.5	5,3
825	2.5	4,5

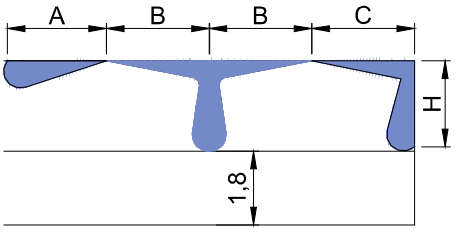
FREE FACE AREA (m2).

AXO-CY	Afree m2	Qmin. m3/h	Qmax. m3/h
300	.01	90	240
400	.0181	163	445
500	.025	225	555
625	.044	387	840
825	.068	612	1105

CORRECTION FACTOR FOR DPt AND Lwa1.

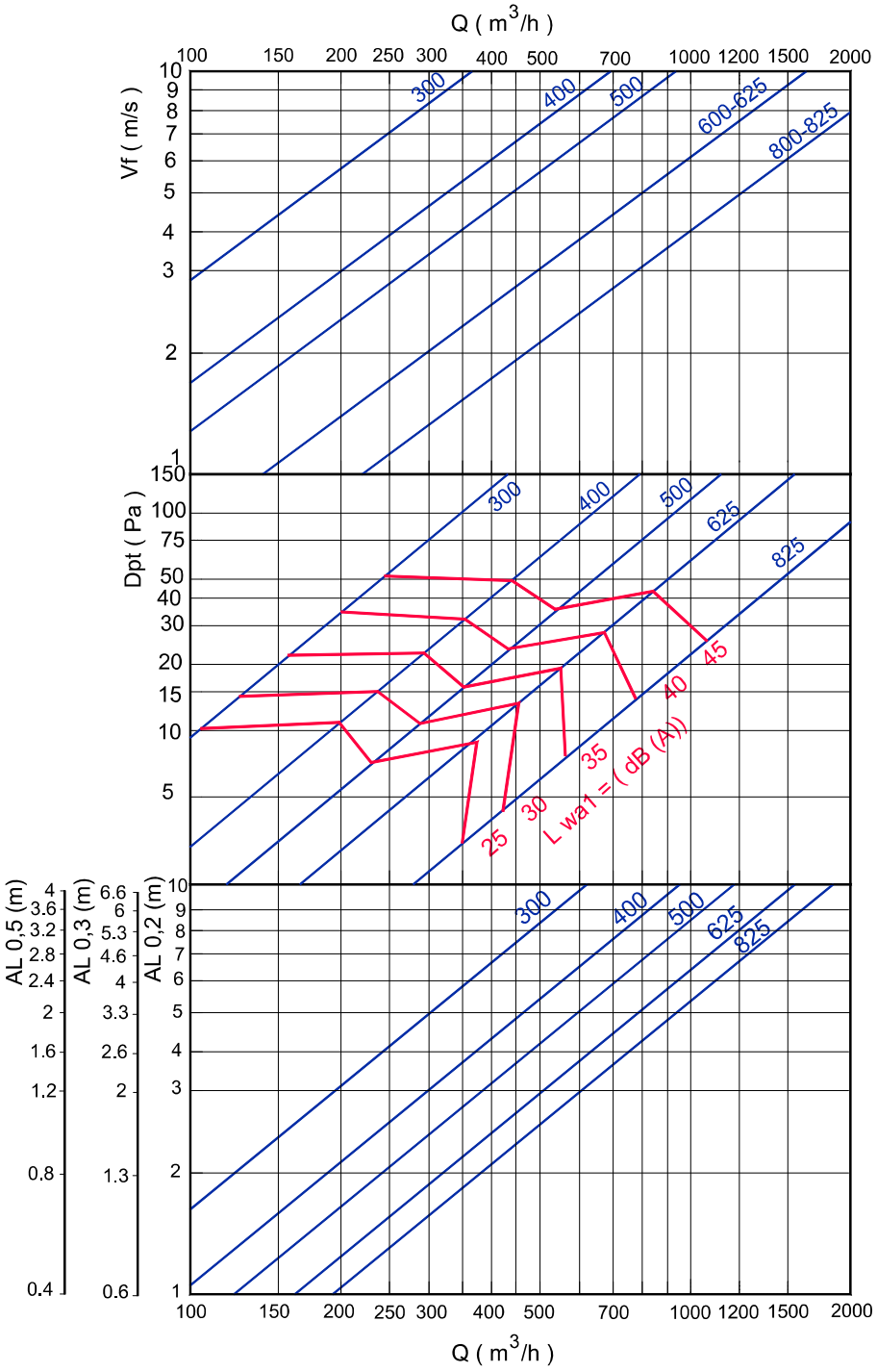
		100% Open	50% Open	10% Open
300	Dpt (Kp)	1	1,2	2,4
	Lwa1 (Kf)	+0,8	+1,4	+0,2
400	Dpt (Kp)	1	2	2,3
	Lwa1 (Kf)	+0,8	+2,2	+1,9
500	Dpt (Kp)	1	1,4	4
	Lwa1 (Kf)	+0,8	+2,1	+1,7
625	Dpt (Kp)	1	1,5	4,8
	Lwa1 (Kf)	+0,8	+5,1	+7
825	Dpt (Kp)	1	1,7	4,5
	Lwa1 (Kf)	+0,9	+4,4	+7,8

DPt1 = Kp x DPt
Lwa = Lwa1 + Kf



$AL_{0.2}$= A
$AL_{0.2}$= B+H
$AL_{0.2}$= C+H

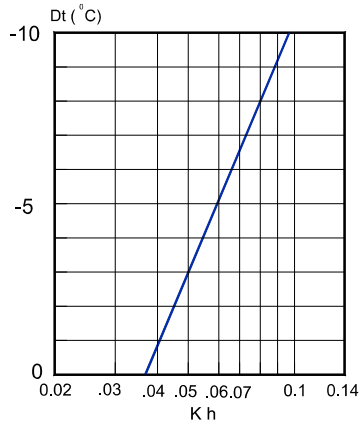
FREE VELOCITY, PRESSURE LOSS AND SOUND POWER LEVEL, THROW WITH CEILING EFFECT.



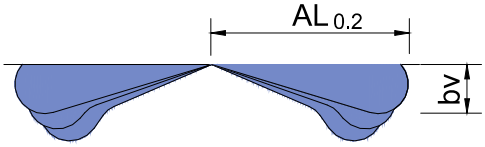
Note: In MadelMedia Octava band centre frequency in Hz.

AXO-CY

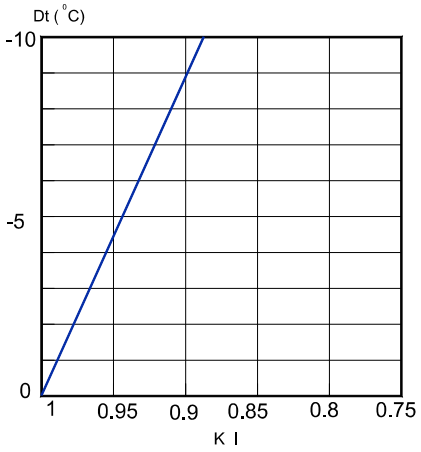
CORRECTION FACTOR FOR VERTICAL DIFFUSION (bV) FOR DT (-).



Kh = Correction factor for the vertical diffusion.



CORRECTON FACTOR FOR THROW (L0.2) DT (-).



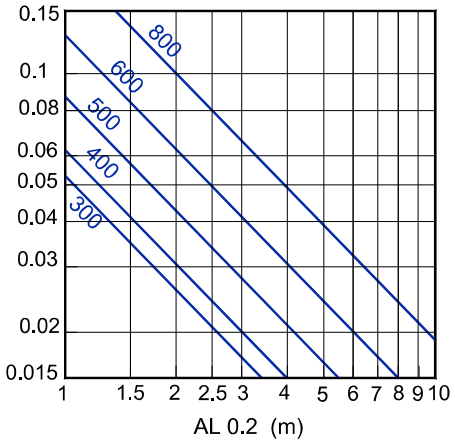
Kl = Correction factor for the throw.

$$bv = Kh \times AL_{0.2}$$

$$AL'_{0.2}\ (Dt<0) = Kl \times AL_{0.2}$$

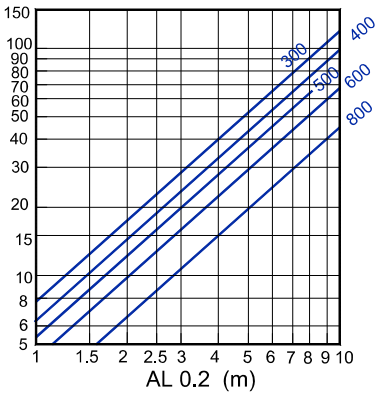
TEMPERATURE RATIO.

$$\frac{Dtl}{Dtz} = \frac{t\ room - t\ x}{t\ room - t\ supply}$$

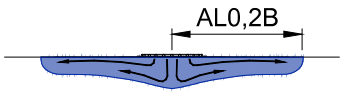


INDUCTION RATIO.

$$i = \frac{Qr}{Q_0} = \frac{Q\ total\ at\ x}{Q\ of\ supply.}$$



TYPE B. 50% POSITION 1 AND 50% POSITION 2.



$$i = \frac{Qr}{Q_0} = \frac{Q\ total\ at\ x}{Q\ of\ supply.}$$

AL0,2B = KB * AL0,2

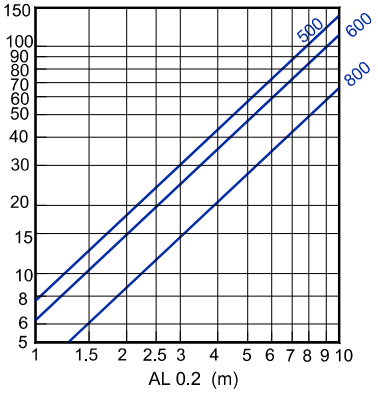
EXAMPLE:

AXO-C-600
Q = 600 m3/h
AL0,2 = 4 m
AL0,2B = 0,74 * 4 = 2,96 m
i = 28

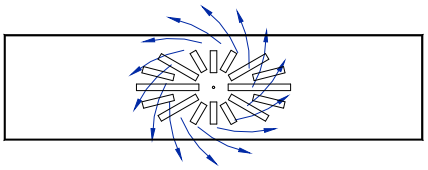
CORRECTION FACTOR FOR THROW TYPE B.

	KB
500	0,75
625	0,74
825	0,7

INDUCTION RATIO. TYPE B.



AXO-R (Technical data geometry GC equal to AXO-S)



RECOMMENDED VELOCITY.

AXO-GR	Vmin m/s	Vmax m/s
400	2.5	6,8
500	2.5	6,1
600	2.5	5,3

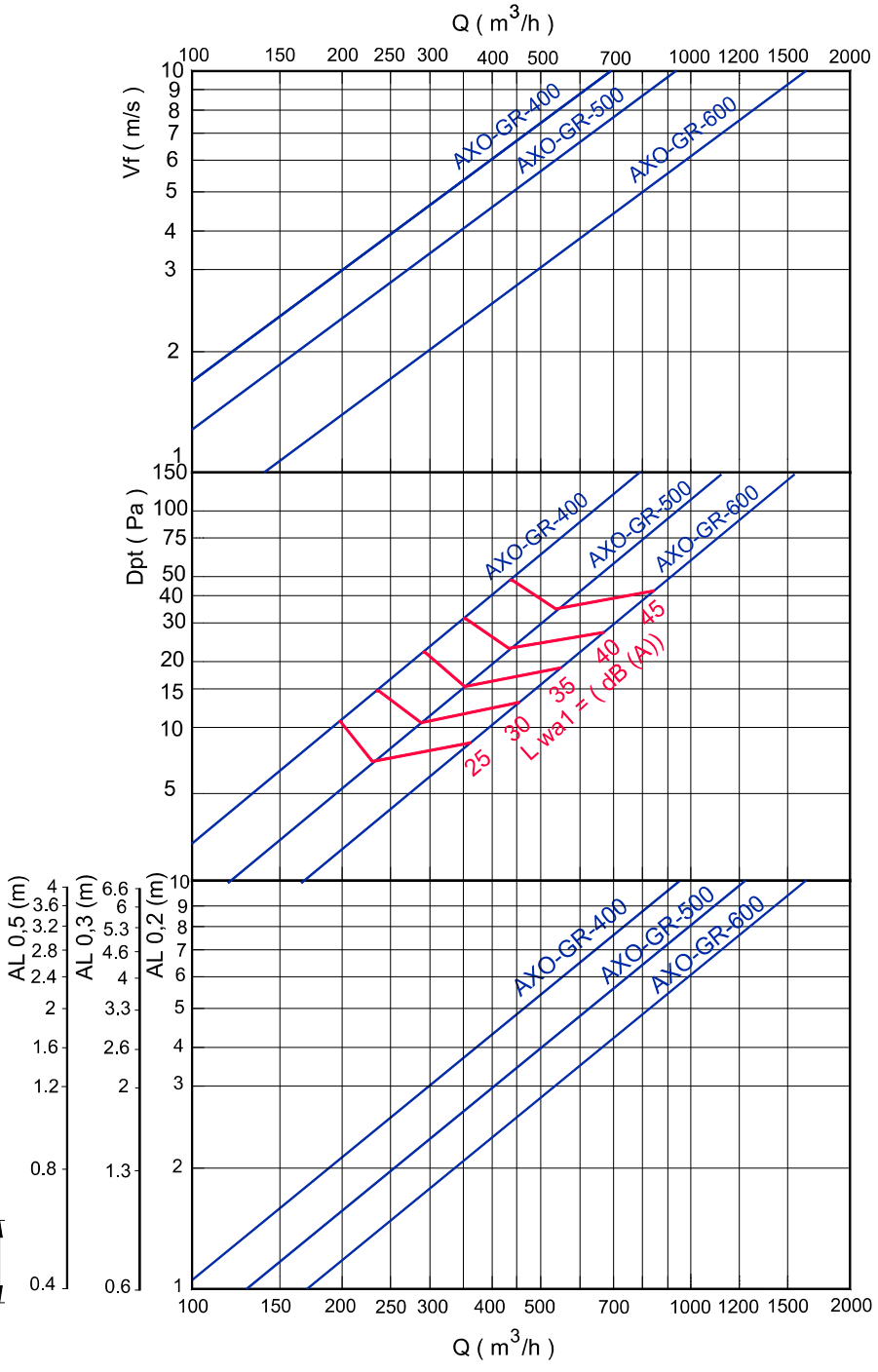
FREE FACE AREA (m2).

AXO-GR	Afree m2	Qmin. m3/h	Qmax. m3/h
400	.0181	163	445
500	.025	225	555
625	.044	387	840

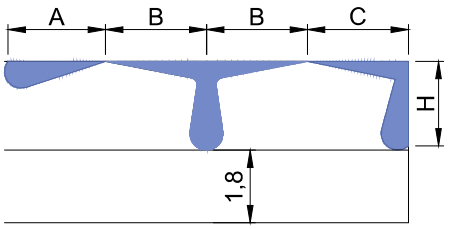
CORRECTION FACTOR FOR DPt AND Lwa1.

AXO-GR		100% Open	50% Open	10% Open
400	Dpt (Kp)	1	2	2,3
	Lwa1 (Kf)	+0,8	+2,2	+1,9
500	Dpt (Kp)	1	1,4	4
	Lwa1 (Kf)	+0,8	+2,1	+1,7
625	Dpt (Kp)	1	1,5	4,8
	Lwa1 (Kf)	+0,8	+5,1	+7

FREE VELOCITY, PRESSURE LOSS AND SOUND POWER LEVEL, THROW WITH CEILING EFFECT.



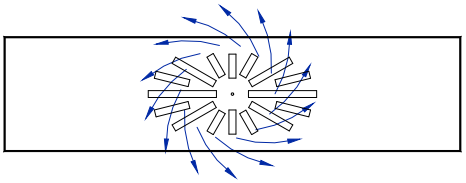
DPt1 = Kp x DPt
Lwa = Lwa1 + Kf



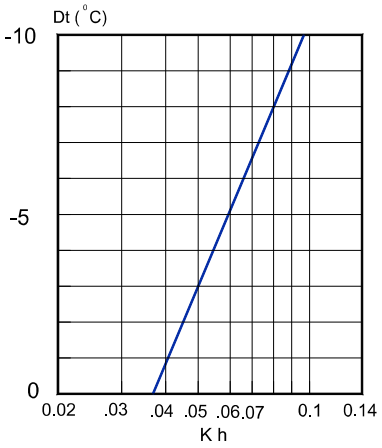
$AL_{0.2}$ = A
$AL_{0.2}$ = B+H
$AL_{0.2}$ = C+H

Note: In MadelMedia Octava band centre frequency in Hz.

AXO-R (Technical data geometry GC equal to AXO-S)

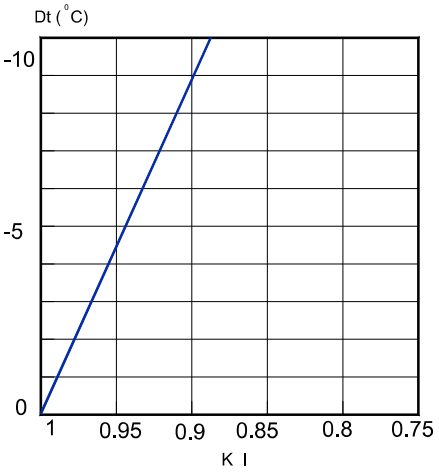


CORRECTION FACTOR FOR VERTICAL DIFFUSION (bV) FOR DT (-).



Kh = Correction factor for the vertical diffusion.

CORRECTON FACTOR FOR THROW (L0.2) DT (-).



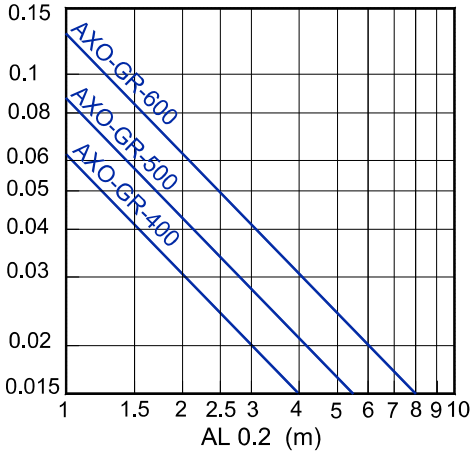
KI = Correction factor for the throw.

$bv = Kh \times AL_{0.2}$

$AL'_{0.2}\ (Dt<0) = KI \times AL_{0.2}$

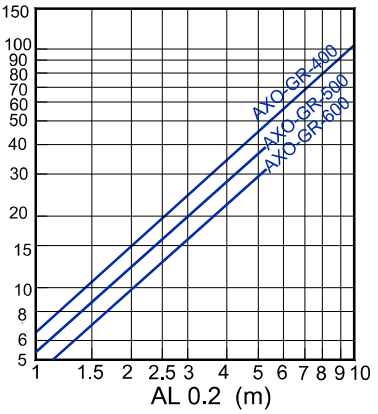
TEMPERATURE RATIO.

$$\frac{DtI}{Dtz} = \frac{t\ room - t\ x}{t\ room - t\ supply}$$



INDUCTION RATIO.

$$i = \frac{Qr}{Q_0} = \frac{Q\ total\ at\ x}{Q\ of\ supply.}$$



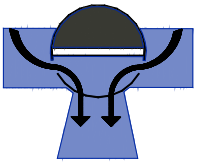
AXO series (Air return technical data)

CORRECTION FACTOR FOR VERTICAL THROW (Alv0,2) DT(+).

AXO-S AXO-R-GC	DT(+0)	DT(+5)	DT(+10)
300 (Kv)	0,75	0,53	0,44
400 (Kv)	0,76	0,54	0,47
500 (Kv)	0,7	0.5	0.4
600 (Kv)	0,8	0,7	0,53
800 (Kv)	0.85	0.74	0.57

AXO-SY	DT(+0)	DT(+5)	DT(+10)
300 (Kv)	0,75	0,53	0,44
400 (Kv)	0,76	0,54	0,47
500 (Kv)	0,7	0.5	0.4
600 (Kv)	0,84	0,72	0,55
800 (Kv)	0.85	0.74	0.57

VERTICAL SUPPLY.



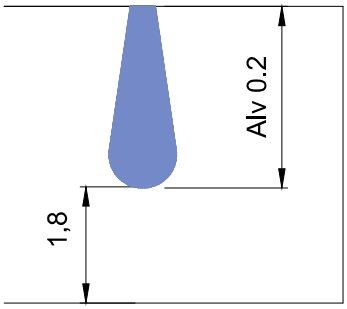
POSITION 2.

AXO-SX	DT(+0)	DT(+5)	DT(+10)
300 (Kv)	0,78	0,55	0,47
400 (Kv)	0,81	0,56	0.5
500 (Kv)	0,75	0.53	0.47
600 (Kv)	0,89	0,74	0,57
800 (Kv)	0,9	0,78	0,6

DT(+)= T supply - T room

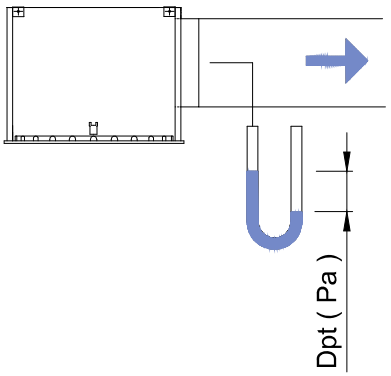
EXAMPLE:
AXO-S-600
Q = 600 m3/h
DT(+5)
AL0,2 = 4 m
ALv0,2 = 0,7 * 4 = 2,8 m

TYPE C. 100% POSITION 2.

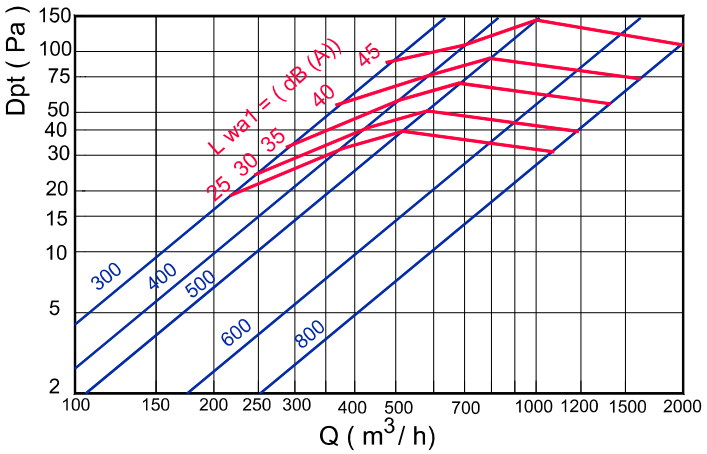


PRESSURE LOSS AND SOUND POWER LEVEL : EXTRACT.

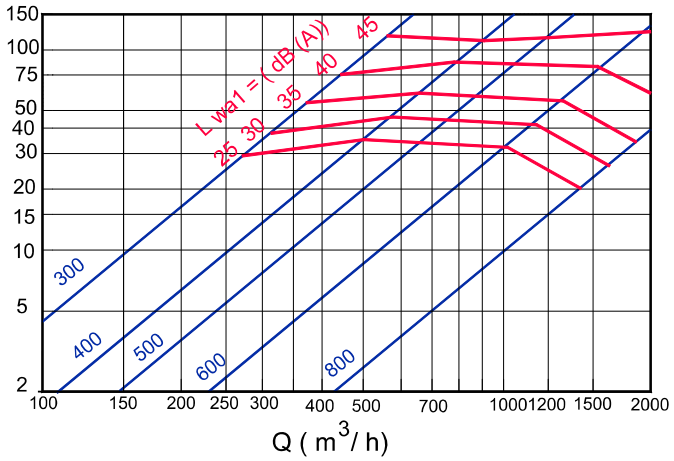
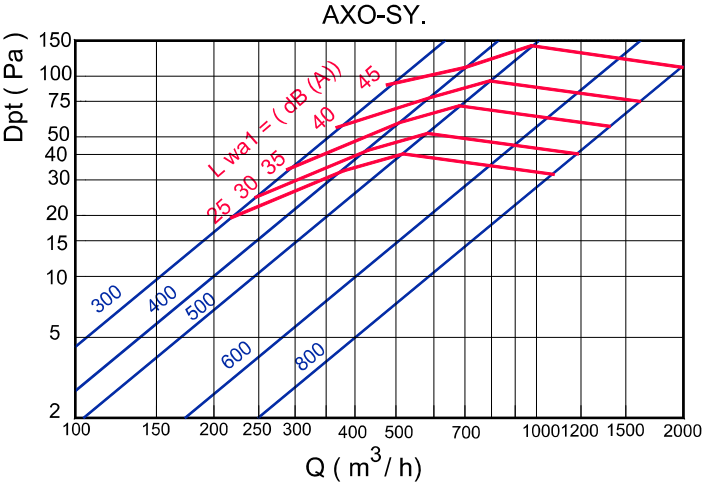
EXTRACT.



AXO-R-GC.
AXO-C.
AXO-S.



AXO-SX.



AXO-CY.
AXO-SY.