

RXO FIXED VANES SWIRL DIFFUSERS

MADEL®

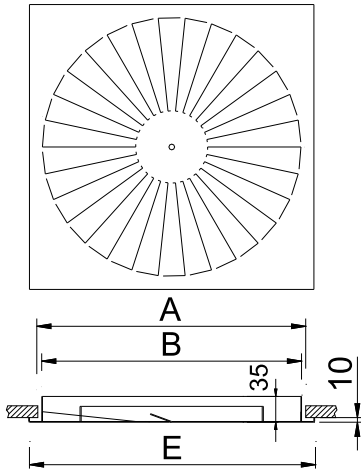
The **RXO** swirl diffusers are designed to be applied in air conditioning ventilation and heating systems. They can be mounted in false ceilings or suspended from the ceiling.

The design of their vanes and its radial arrangement in the diffuser cause swirl air supply with a coanda effect, which provides a high level of induction rate of the air in the atmosphere and reducing the stratification.

Their sectorized vanes emit a uniform air flow all over the passage section.

The **RXO** series diffusers admit a flow variation of 60% keeping the air stream stable.

These diffusers can be used from 2,6 up to 4 meters high and at a temperature differential up to 12°C.



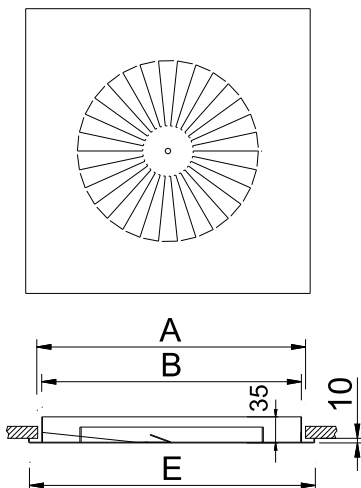
CLASSIFICATION

RXO-S Square diffuser with vanes in circular radial arrangement.

RXO-S/SR/ Reduced face area in relation to the diffuser size.

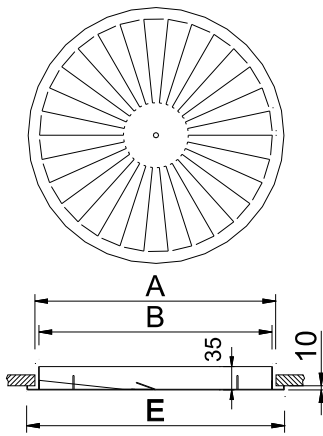
RXO-S

	E	A	B
300	295	270	240
310	308	270	240
400	395	370	340
500	495	470	440
600	595	568	538
625	620	568	538



RXO-SR

	E	A	B
600-400	595	568	340
600-500	595	568	440
625-400	620	568	340
625-500	620	568	440



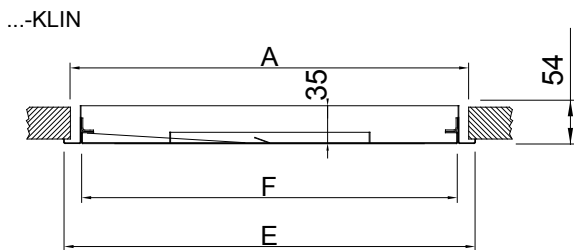
RXO-C

	E	A	B
300	300	270	240
400	400	370	340
500	500	470	440
600	600	568	538
625	625	568	538

RXO-C Circular diffuser with vanes in circular radial arrangement.

RXO-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 of HVAC installations.



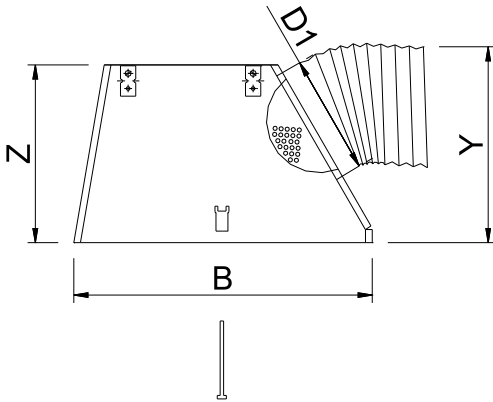
	E	A	F
400	395	369	345
500	495	469	445
600	595	569	545
625	620	594	570
600-400	595	569	545
600-500	595	569	545
625-400	620	594	570
625-500	620	594	570

MATERIAL

Diffuser constructed from galvanised steel.

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 ceiling is airtight.

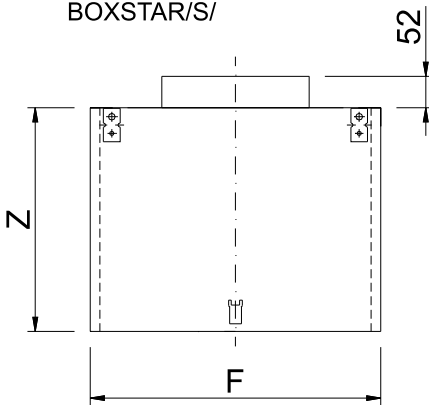
BOXSTAR...-R



BOXSTAR...-R

	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	590	350	375	248
625	615	350	375	248
800	790	415	440	313
825	815	415	440	313

BOXSTAR/S/



BOXSTAR/S/

	F	Z	D1
310	305	300	198
400	390	300	198
500	490	300	198
600	590	350	248
625	615	350	248
800	790	415	313
825	815	415	313

ADDITIONAL ACCESSORIES

BOXSTAR Plenum box with a lateral circular connection for **RXO-S...** diffusers.

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.

Plenum box to pile up. It spares more than 50 % volume in relation to a conventional plenum box.

...-R Plenum box with a flow damper in the spigot.

.../AIS/ Plenum box thermo acoustically insulated by a foam with a coefficient of thermal conductivity of 0,04 w/mk.

This foam complies with the fire reaction specifications:

UNE 23-727 M2

NFP 92-501 M2

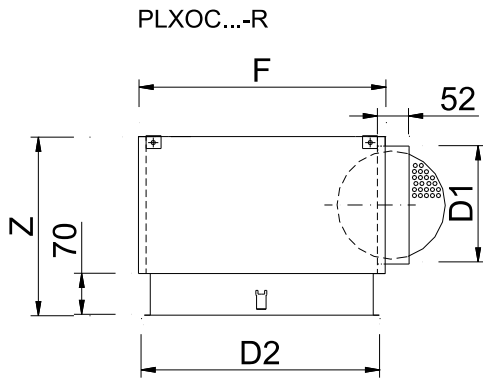
DIN 4102 M2

BOXSTAR/S/ Plenum box with an upper circular neck connection for **RXO-S...** diffusers.

It includes supports to hang from the ceiling.

Made in galvanised steel.

...-R Plenum box with a flow damper in the spigot.



PLXOC

	D2	F	Z	D1
300	295	315	300	198
400	395	415	300	198
500	495	515	300	198
600	595	615	350	248
625	620	640	350	248

.../AIS/ Plenum box thermo acoustically insulated by a foam with a coefficient of thermal conductivity of 0,04 w/mk.

This foam complies with the fire reaction specifications:

UNE 23-727 M2

NFP 92-501 M2

DIN 4102 M2

PLXOC Plenum box with a lateral circular connection for RXO-C... circular diffusers.

...-R Plenum box with flow damper in the spigot.

.../S/ Plenum box with an upper connection.

.../AIS/ Plenum box thermo acoustically insulated by a foam with a coefficient of thermal conductivity of 0,04 w/mk.

This foam complies with the fire reaction specifications:

UNE 23-727 M2

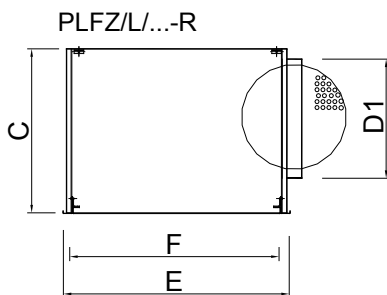
NFP 92-501 M2

DIN 4102 M2

PLFZ Plenum box fixed to the diffuser, suitable for -KLIN models. Plenum box with an upper connection, made in galvanised steel.

...-R Plenum box with a flow damper in the spigot.

.../L/ Plenum box with a lateral connection.



	E	F	C	D1
400	395	345	320	198
500	495	445	370	248
600	595	545	435	313
625	620	570	435	313

.../AIS/ Plenum box thermo acoustically insulated by a foam with a coefficient of thermal conductivity of 0,04 w/mk. This foam complies with the fire reaction specifications:

UNE 23-727 M2

NFP 92-501 M2

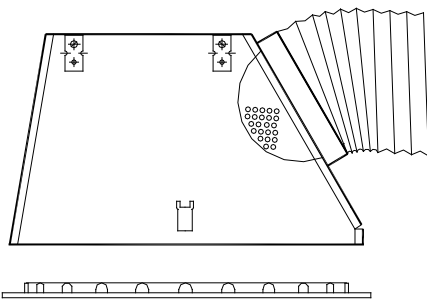
DIN 4102 M2

FIXING SYSTEMS

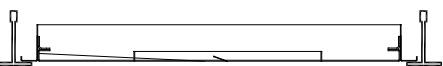
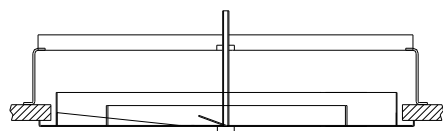
1) Connection into the plenum box by means of central screw, to hang the assembly from the ceiling with drops rods.

1) Connection into the **PMXO** crossbar by means of central screw. Suitable for mounting in false ceiling with rectangular duct. Constructed in galvanised steel.

1) Supports to hang the assembly from the ceiling with drops rods.



PMXO



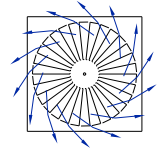
FINISHES

R9010 Lacquer in white colour RAL 9010.

M9016 Lacquer in white colour similar to RAL 9016.

RAL... Lacquer in other colours (RAL specifications).

RXO SERIES



RECOMMENDED VELOCITY.

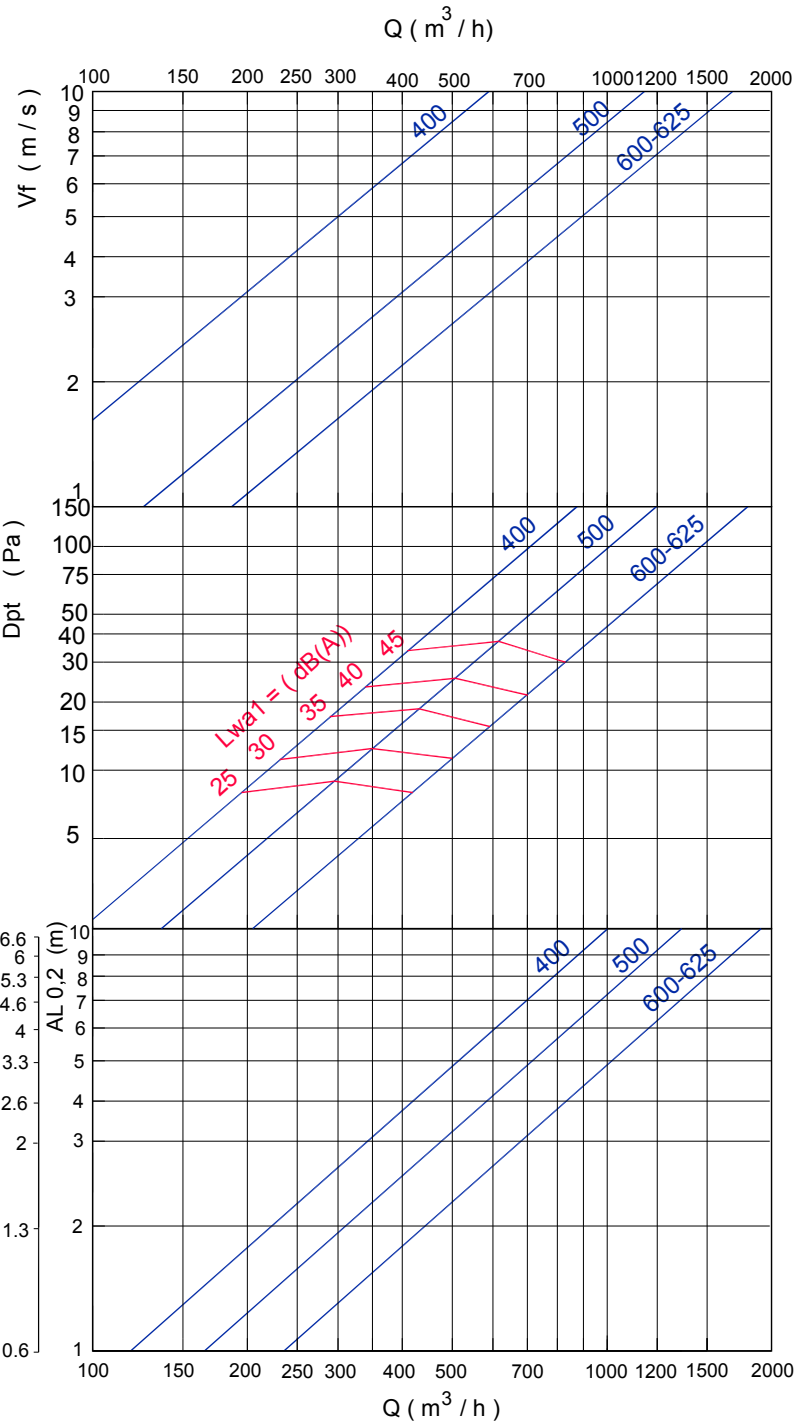
RXO	Vmin m/s	Vmax m/s
400	2.5	6,8
500	2.5	5
600	2.5	4.5
625	2.5	4.5

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

RXO-S + BOXSTAR

FREE FACE AREA (m2).

RXO	Afree m2	Qmin. m3/h	Qmax. m3/h
400	0.0165	150	409
500	0.0336	300	600
600	0.05	500	810
625	0.05	500	810

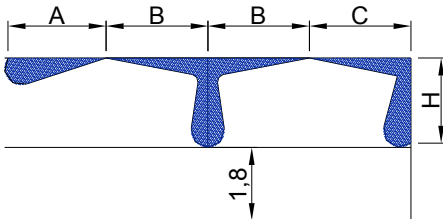


CORRECTION FACTOR FOR D_{Pt} AND L_{wa1} .

BOXSTAR-R		100% Open	50% Open	10% Open
400	Dpt (Kp)	1	1.3	2
	Lwa1 (Kf)	+0	+3,2	+1,8
500	Dpt (Kp)	1	1.7	3,3
	Lwa1 (Kf)	+1	+4,5	+2
600	Dpt (Kp)	1	1.5	5,8
	Lwa1 (Kf)	+0,3	+3,5	+2,5
625	Dpt (Kp)	1	1.5	5,5
	Lwa1 (Kf)	+0,3	+3,5	+2,5

$$D_{Pt1} = K_p \times D_{Pt}$$

$$L_{wa} = L_{wa1} + K_f$$



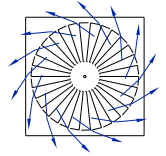
$$AL_{0,2} = A$$

$$AL_{0,2} = B+H$$

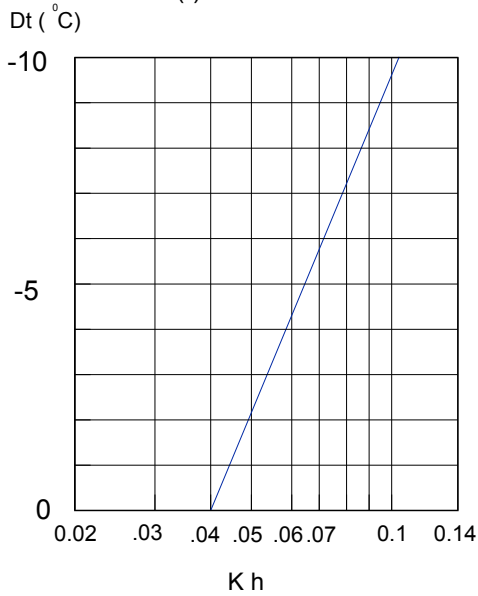
$$AL_{0,2} = C+H$$

Note: In MadelMedia Octava band centre frequency in Hz.

RXO SERIES

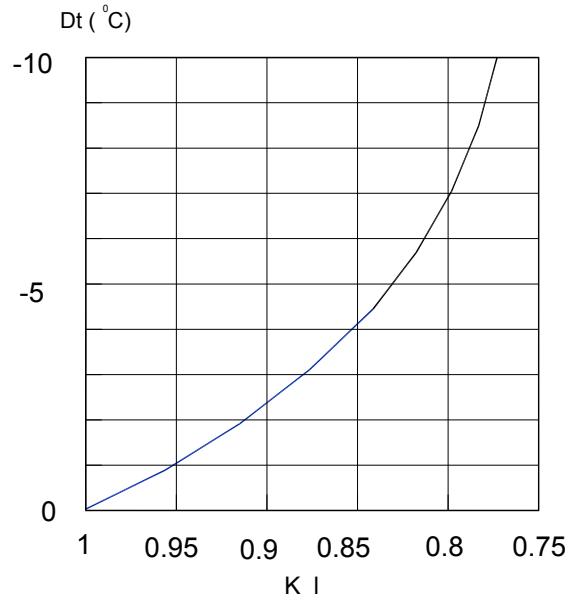


CORRECTION FACTOR FOR VERTICAL DIFFUSION (bv) FOR DT (-).

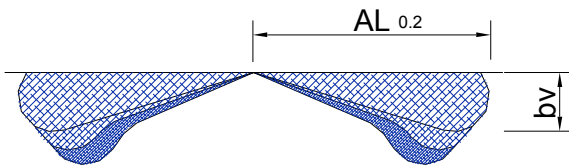


Kh = Correction factor for the vertical diffusion.

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



KI = Correction factor for the throw.

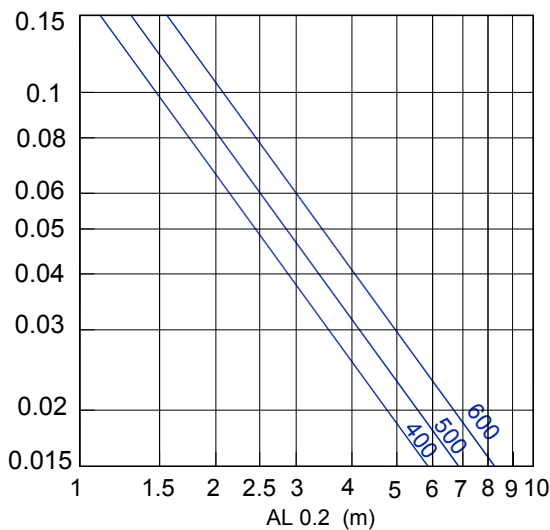


$$bv = Kh \times Al_{0.2}$$

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

TEMPERATURE RATIO.

$$\frac{Dtl}{Dtz} = \frac{t_{room} - t_x}{t_{room} - t_{supply}}$$



INDUCTION RATIO.

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

