

Floor swirl diffuser SAR / SAQ



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SAR/SAQ

Floor swirl diffuser

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SAR/SAQ

Floor swirl diffuser

Description

The floor swirl diffuser type SAR / SAQ is suitable to air condition theatres, auditorias and cinemas. Particularly the extreme mounting situation has been considered during development of the diffuser. The distance between the diffuser and the legs of the visitors frequently is $< 0,4$ m. Draughts can be avoided if flow velocity and temperature difference are reduced quickly. This is not possible if the supply air volume or high temperature differences ΔT_0 are too high, then on those short distances the velocity and temperature differences cannot be overcome and create draughts.

The maximum temperature difference is ± 6 K.

A highly inductive air throw is achieved by the non-adjustable, radial air deflection blades. The floor swirl diffusers are suitable for vertical installation in steps.

An integrated perforated sheet steel (FQ = 33%) is like a dropping resistance which creates a certain pre-pressure. Therefore, an equal distribution of supply air is given.

The floor swirl diffuser is available as round model type SAR sizes 60, 110 and 150 and as square model type SAQ size 110.

To reduce the assembly costs, up to seven floor swirl diffuser (type SAR-60/-110) can be integrated in one panel.

Construction

swirl diffuser plate	- enamelled sheet steel RAL 9010 (white)
mounting ring	- sheet steel painted to RAL colour of the swirl diffuser plate
	- plastic RAL 9005 (black) (for size 110)
rectifier sheet	- enamelled perforated sheet steel to the RAL colour of the swirl diffuser plate

Model

SAR	- with round face plate and inlet spigot
SAQ	- with square face plate and inlet spigot
SAR-...-P	- panell
SAR-T	- with round face plate and traverse fixing, without inlet spigot
SAQ-T	- with square face plate and fixing traverse, without inlet spigot

Fixing

fixing claws (-BK)	- for size NW 150 (at extra cost)
fixing via springs (FM)	- for size 60
screw fixing (-SM)	- for sizes 110 and 150 and for SAR-...-P
secret fixing (-VM)	- for sizes 110 and 150 and for SAR-...-P (at extra cost)

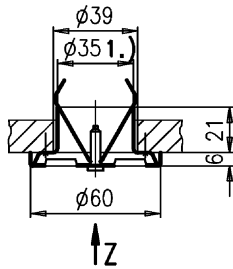
SAR/SAQ

Floor swirl diffuser

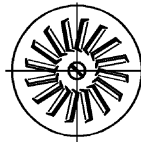
Models and dimensions

Dimensions

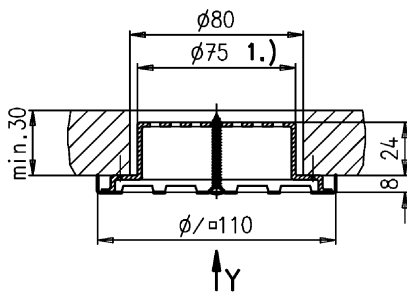
SAR-60 (-FM)



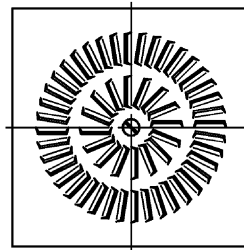
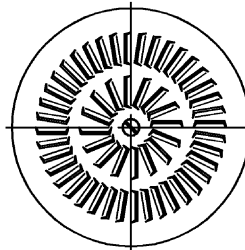
view Z



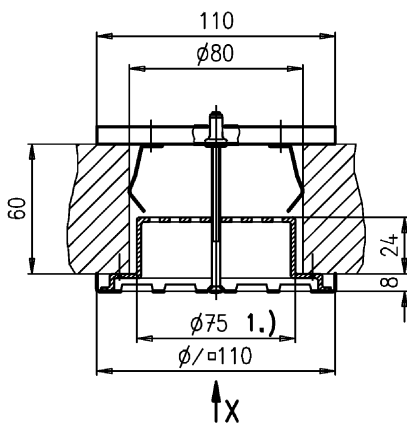
SAR/SAQ 110 (-SM)



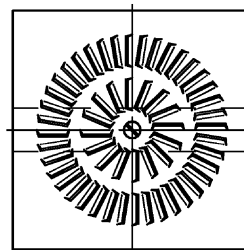
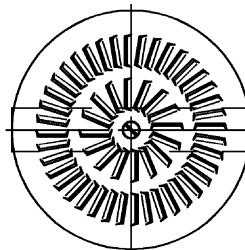
**view Y
SAR SAQ**



SAR/SAQ-110 (-VM)



**view X
SAR SAQ**



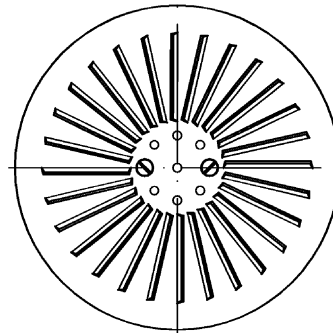
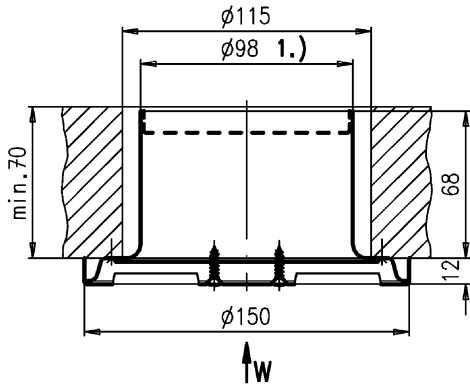
1.) external

SAR/SAQ

Floor swirl diffuser

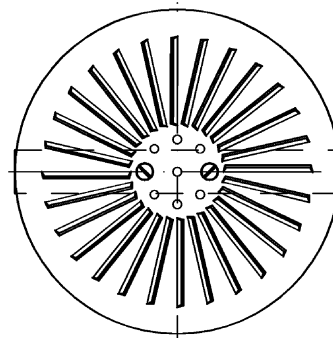
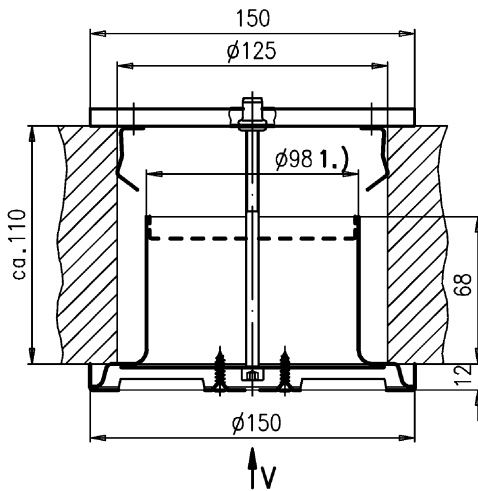
SAR-150 (-SM)

view W

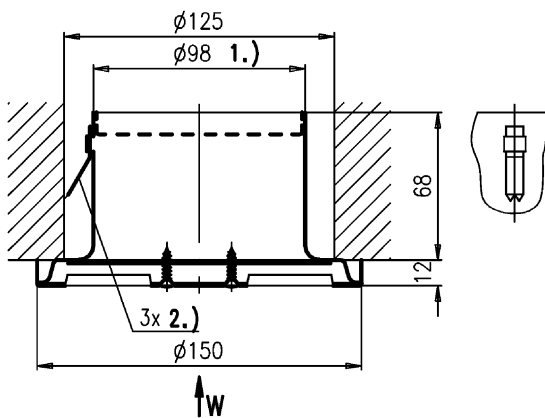


SAR-150 (-VM)

view V



SAR-150 (-BK)



1.) external

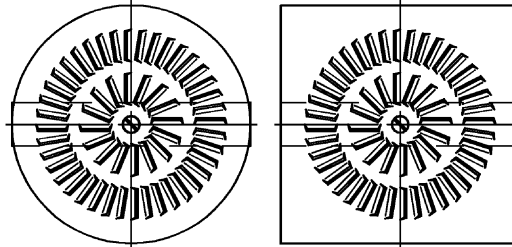
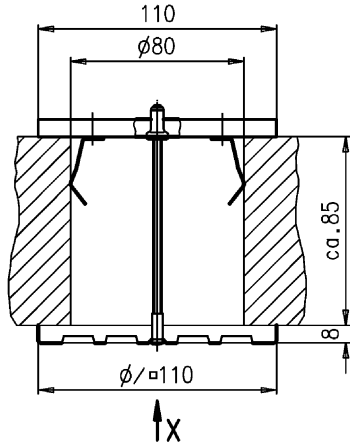
2.) fixing craws

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Floor swirl diffuser

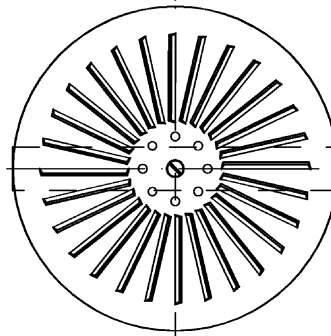
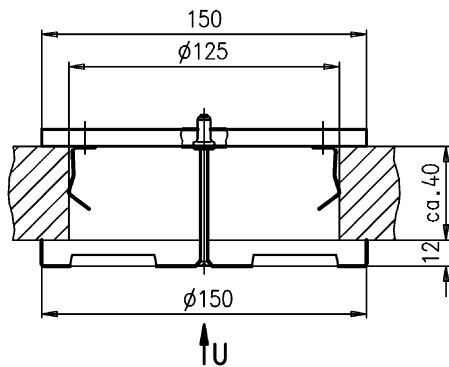
SAR-T/SAQ-T-110 (-VM)

view
SAR-T SAQ-T



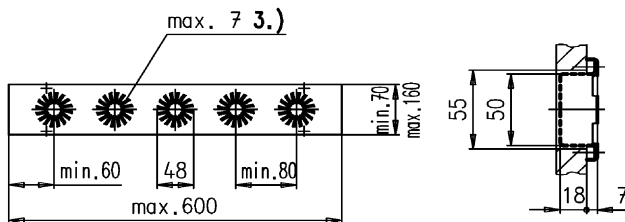
SAR-T-150 (-VM)

view U



Fixing possibilities

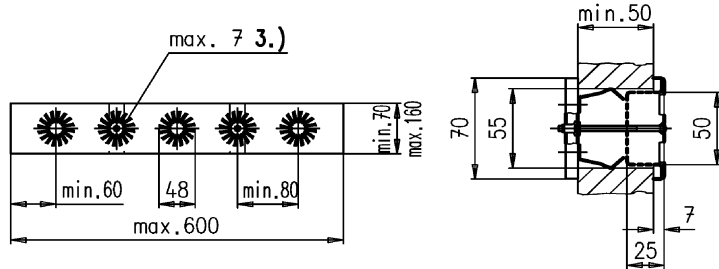
SAR-60-P with screw mounting (-SM)



SAR/SAQ

Floor swirl diffuser

SAR-60-P with secret fixing (-VM)

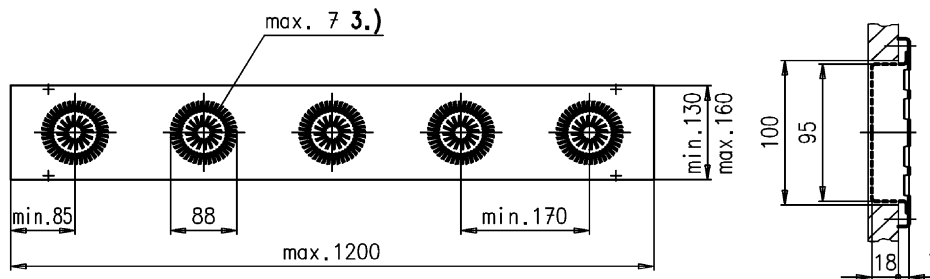


3.) swirl diffusers

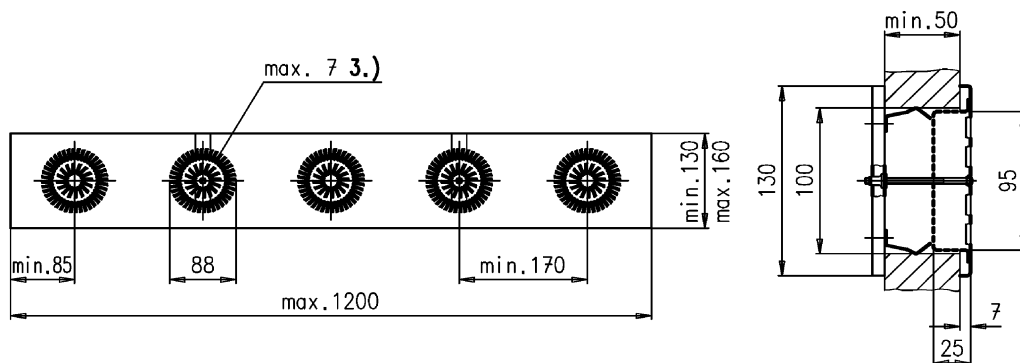
Attention:

Number of swirl diffusers as well as length and width of the panel (e.g. -7 / 600 x 160) must be specifically ordered.

SAR-110-P with screw mounting (-SM)



SAR-110-P with secret fixing (-VM)



3.) swirl diffusers

Attention:

Number of swirl diffusers as well as length and width of the panel (e.g. -7 / 600 x 160) must be specifically ordered.

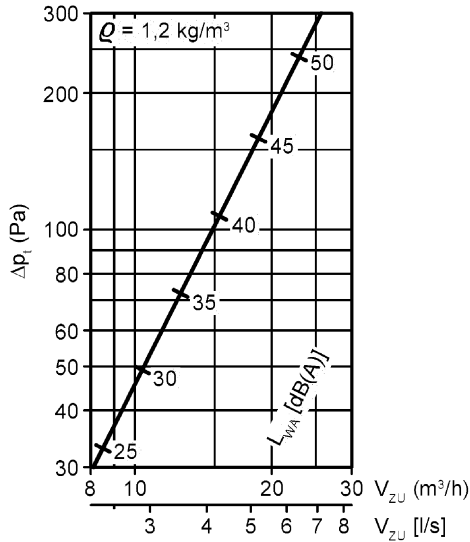
SAR/SAQ

Floor swirl diffuser

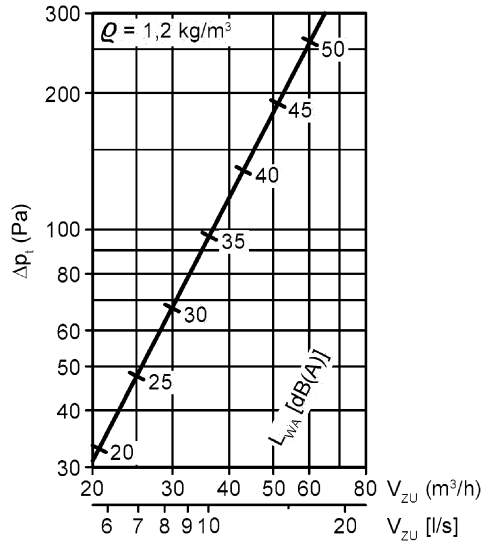
Technical data

Pressure loss and noise level

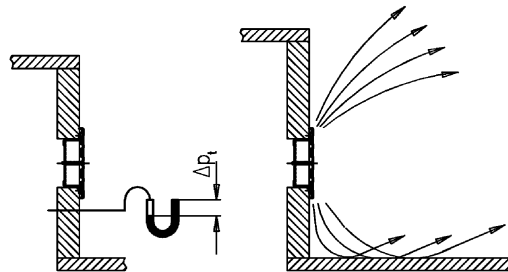
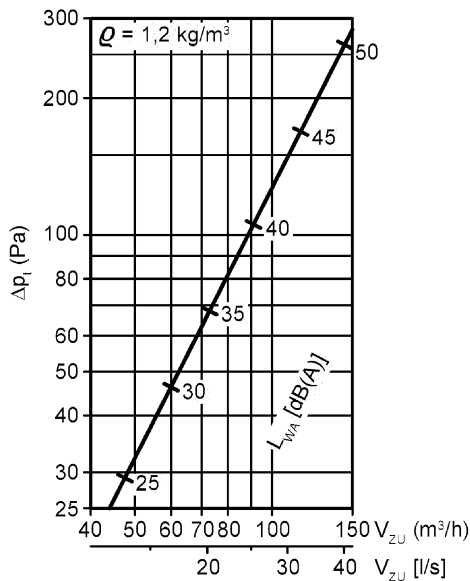
SAR-60



SAR / SAQ-110



SAR-150



The technical data may change according to chair arrangement.

correction factor

1.)	1	2	3	4	5	6	7
KF (-)	0	+3	+4,8	+6	+7	+8	+9

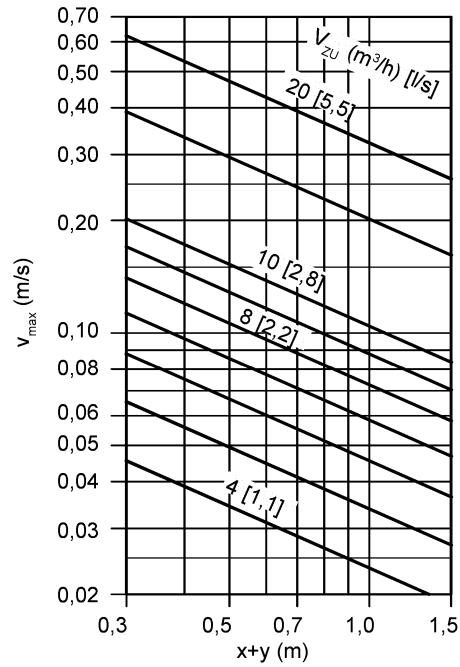
1.) number

SAR/SAQ

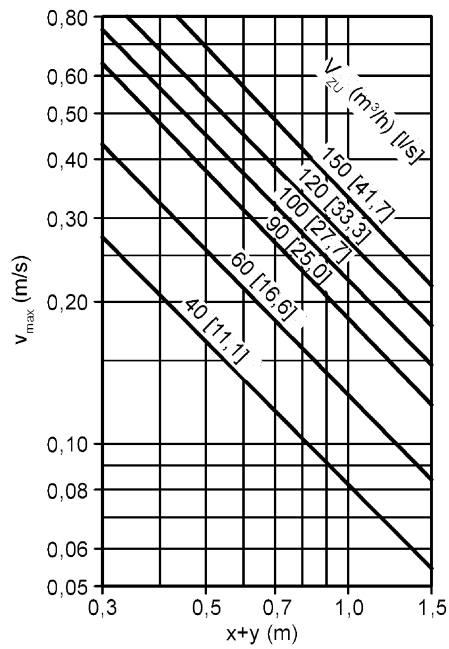
Floor swirl diffuser

Maximum end velocity

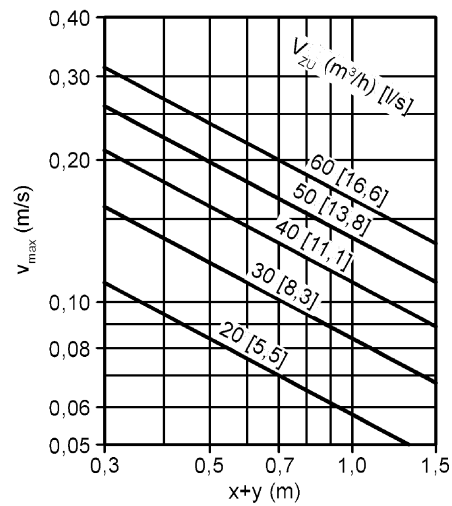
SAR-60



SAR-150



SAR / SAQ-110

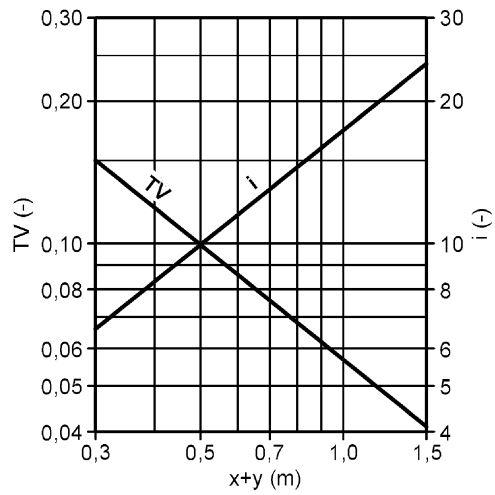


SAR/SAQ

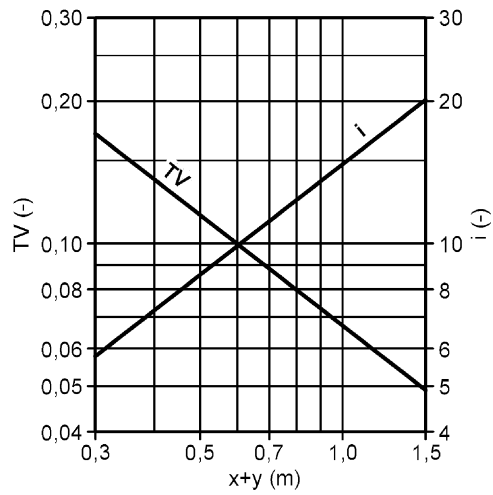
Floor swirl diffuser

Temperature ratio

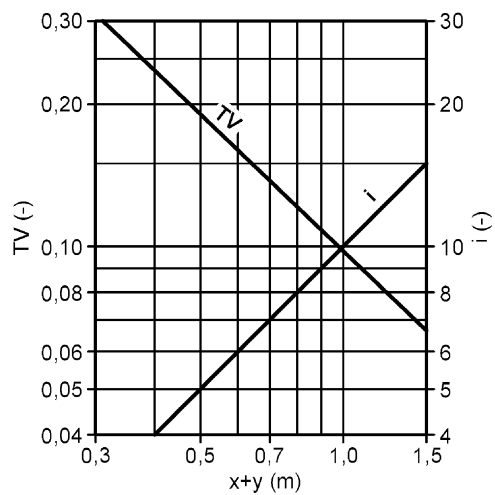
SAR-60



SAR / SAQ-110



SAR-150



Further datas

The technical datas for the floor swirl diffuser types SAR-T / SAQ-T are available on request.

SAR/SAQ

Floor swirl diffuser

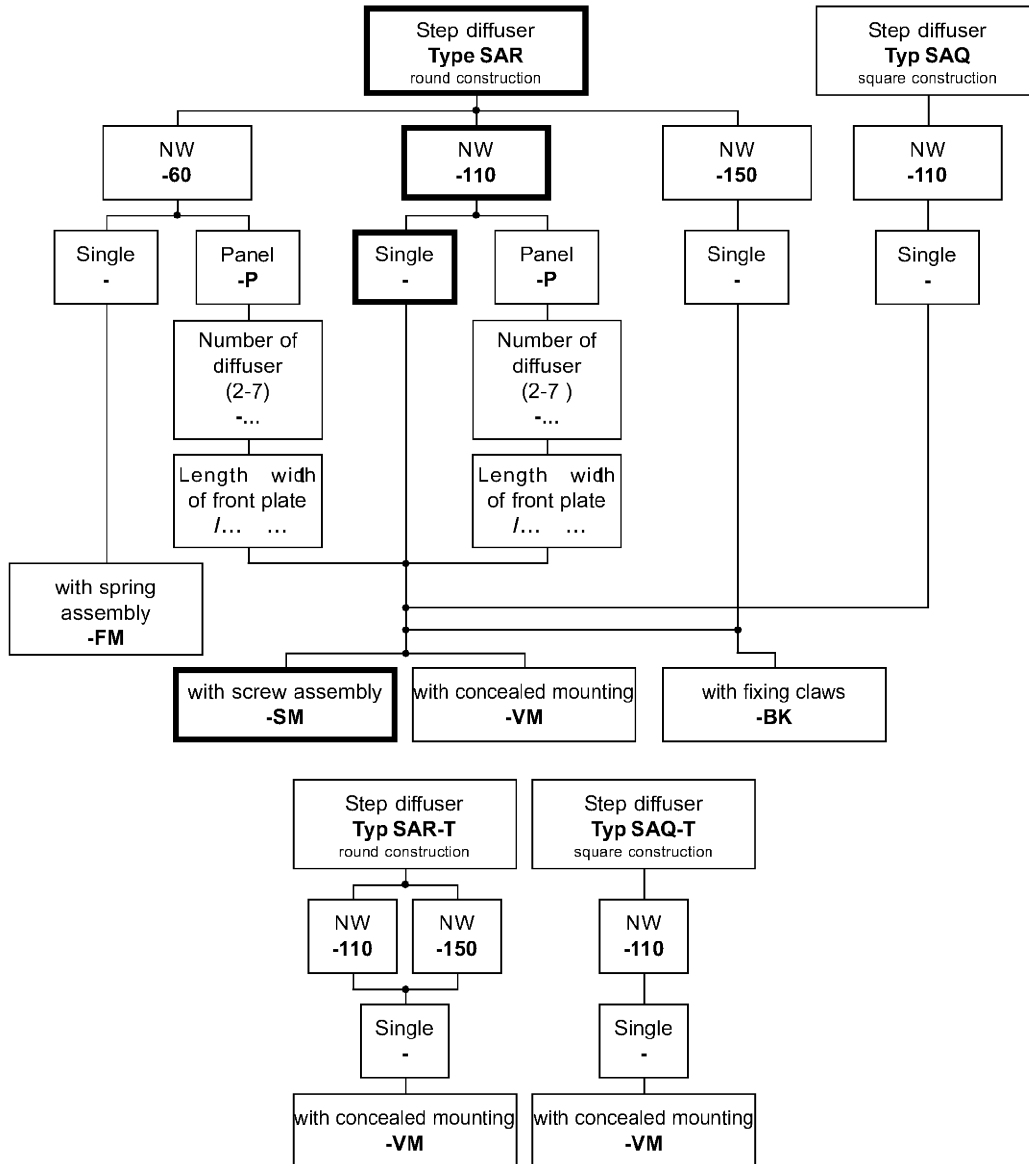
Legend

V_{supp} (m ³ /h)	=	Supply air volume
V_{supp} (l/s)	=	Supply air volume
Δp_1 (Pa)	=	Pressure loss
δ (kg/m ³)	=	Density
L_{WA} [dB(A)]	=	A-weighted sound power level
V_{max} (m/s)	=	Maximum jet end velocity
x+y (m)	=	Horizontal and vertical jet path
i (-)	=	Induction ratio
TV (-)	=	Temperature ratio
NW	=	Nominal width

SAR/SAQ

Floor swirl diffuser

Order details



Order example:

SAR-110-P-3/510 160-SM

At non-specified order the thick framed design will be delivered!

SAR/SAQ

Floor swirl diffuser

Specification texts

Floor swirl diffuser for micro ventilation suitable for vertical installation in steps consists of a round swirl diffuser plate of enamelled sheet steel RAL 9010 (white) and quick-installation mounting ring of enamelled sheet steel to the RAL colour of the face plate. Non-adjustable radial air guidance blades create a highly inductive throw to quickly reduce both air velocity and temperature difference. Size 60 available with spring assembly (-FM).

Manufacturer: SCHAKO **type SAR**

Floor swirl diffuser for micro ventilation suitable for vertical installation in steps consists of a round swirl diffuser plate of enamelled sheet steel RAL 9010 (white) and quick-installation mounting ring with integrated perforated sheet steel (FQ 33 %) in order to create a pre-pressure. The perforated sheet steel is enamelled to the RAL colour of the face plate; at size 110 of plastic RAL 9005 (black).

Non-adjustable radial air guidance blades achieve a highly inductive throw to reduce both air velocity and temperature difference. Sizes 110 and 150 available with screw mounting (-SM) or secret mounting (-VM) (at extra cost). Size 150 also available with fixing craws (-BK) (optional extra).

Manufacturer: SCHAKO **type SAR**

- integration in panels with screw mounting (-SW); sizes 60 and 110