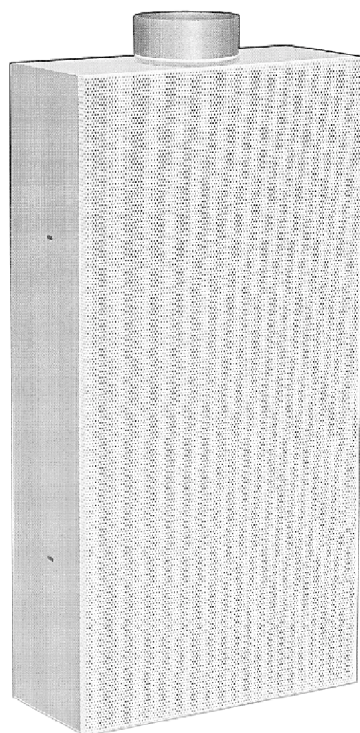


**wall displacement diffuser
WQA**



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WQA

wall displacement diffuser

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WQA

wall displacement diffuser

Description

In buildings such as large industrial halls producing high amounts of harmful substances it is better to ventilate these areas using a low velocity displacement system. The supply air leaks into the occupied zone at a low velocity of approx 0.2 m/s. The fresh air sinks to the floor, spreads itself and displaces the contaminated air towards the extract air grilles. Natural convection currents from the heat sources within the area causes the air to rise to high level. Extract grilles at high level encourages this movement of air to high level.

The wall displacement diffuser can be fitted directly to the wall. It can also be integrated into the wall for a flush fitting. They can also be connected directly to spiral wound ductwork.

An equalising grid or filter pocket(standard) is used to ensure an even flow of air across the whole faceplate. The filter can easily be changed by removing the faceplate of the diffuser.

Construction

filter pocket	- synthetic fiber class EU2
faceplate	- perforated sheet steel painted RAL 9010 (white)
housing	- painted sheet steel RAL 9010 (white)
equalising grid (-LV)	- galvanised sheet steel

Model

WQA-R-...	- with circular spigot
WQA-K-...	- with rectangular spigot
WQA-...-O	- top entry spigot
WQA-...-U	- bottom entry spigot
WQA-...-H	- back entry spigot
WQA-...-L/R	- side entry spigot left or right
WQA-...-...-FT	- with filter pocket (standard)
WQA-...-...-LV	- with equalising grid

Accessories

rubber gasket (-GD)	- special gasket (only WQA-R)
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Fixing

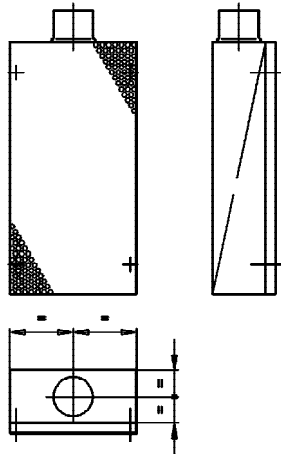
WQA

wall displacement diffuser

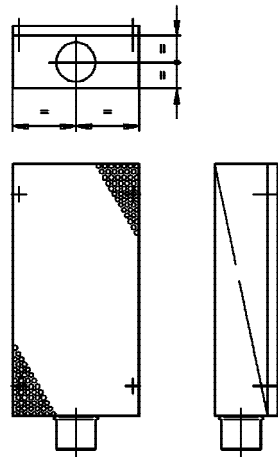
features

possible connections (with equalising grid)

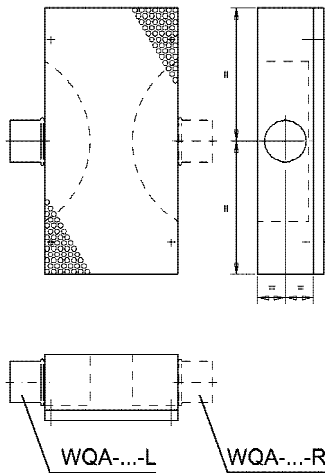
WQA-...-O



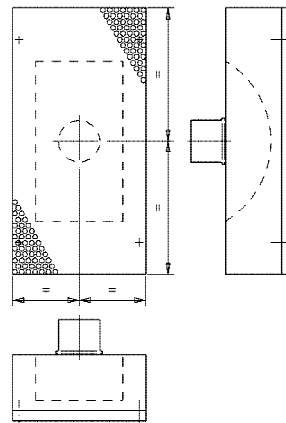
WQA-...-U



WQA-...-L/R



WQA-...-H



models

AF	FT	LV
WQA-...-H	1.)	2.)
WQA-...-O/U	$\geq H=500$	$< H=500$
WQA-...-L/R	$\geq B=500$	$< B=500$

AF = model

FT = filter pocket

LV = equalising grid

1.) = not possible

2.) = all H and B sizes

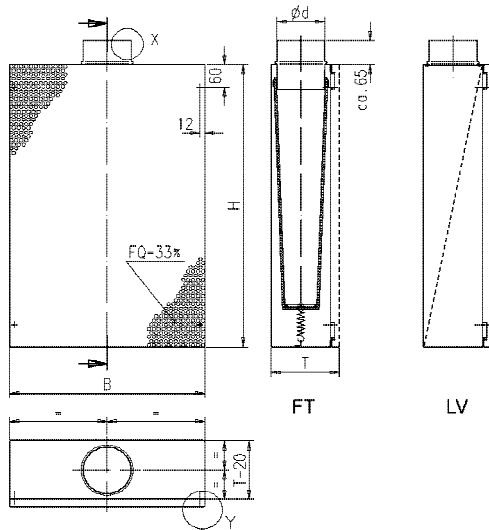
WQA

wall displacement diffuser

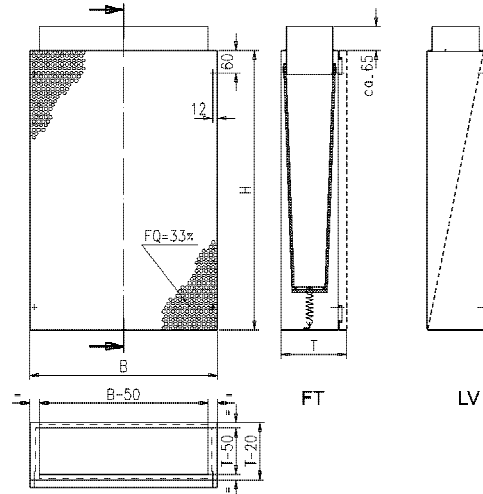
Models and dimensions

Dimensions

WQA-R-...-FT / LV



WQA-K



available sizes

		B				
		250	500	750	1000	
H	150	ød	98	98	98	98
		T	150	150	150	150
	300	ød	98	98	123	158
		T	150	150	175	200
	450	ød	98	123	158	198
		T	150	175	200	250
	500	ød	98	123	158	198
		T	150	175	200	250
	600	ød	98	158	198	198
		T	150	200	250	250
	750	ød	123	158	198	223
		T	175	200	250	275
	1000	ød	123	198	223	298
		T	175	250	275	350

all combinations of B and H are possible.
 special sizes available at extra cost.
 maximum size available is 1000 x 1000 x 350 (B x H x T)

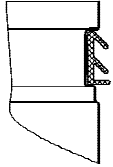
WQA

wall displacement diffuser

Accessories - dimensions

(at extra cost)

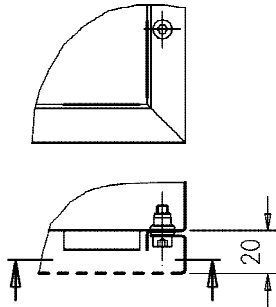
rubber gasket (-GD, only WQA-R)



detail X

Fixing possibilities

screw fixing (SM)



detail Y

WQA

wall displacement diffuser

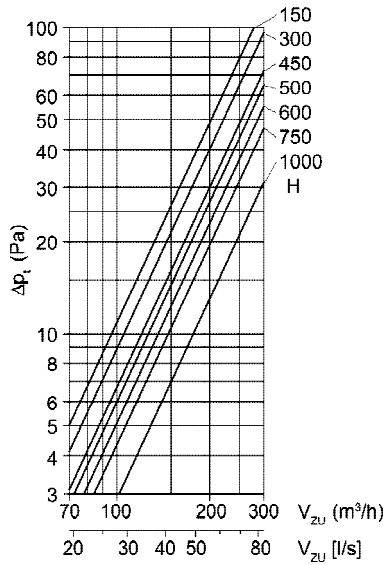
Technical data

Pressure loss and noise level

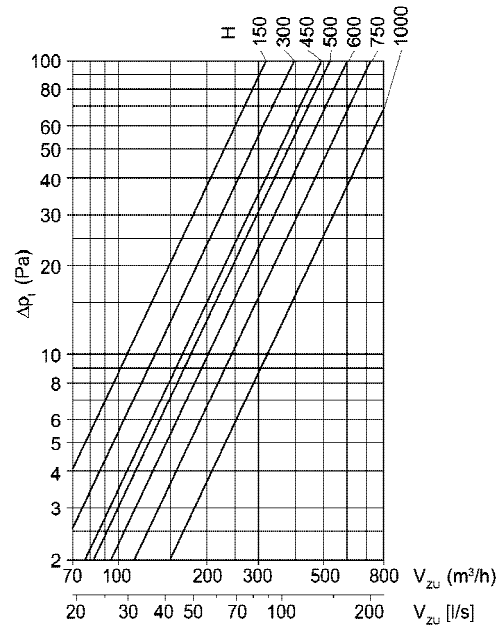
Pressure loss

See page 8 for quick pre-selection table for supply air (V_{supp}).

WQA / B = 250



WQA / B = 500

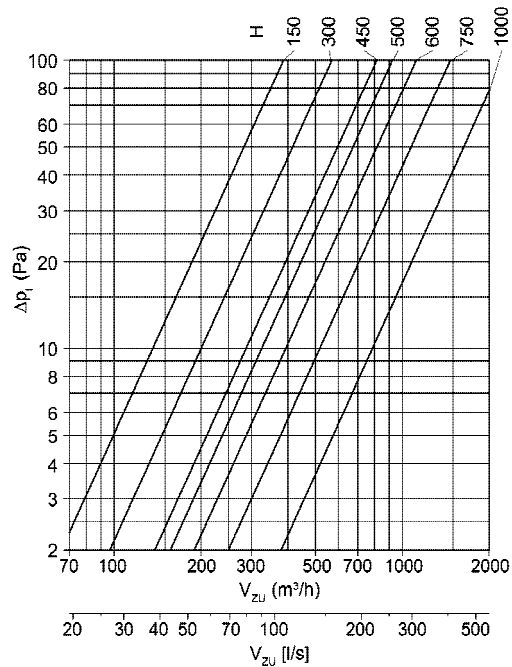
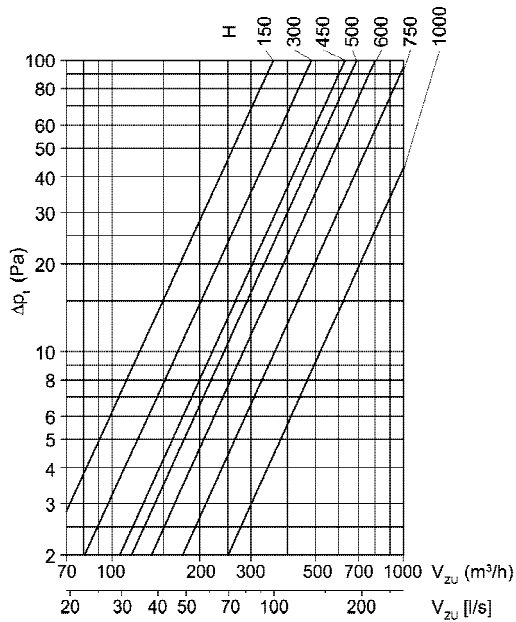


WQA

wall displacement diffuser

WQA / B = 750

WQA / B = 1000



WQA

wall displacement diffuser

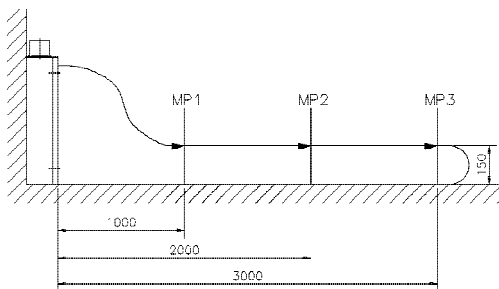
velocities and noise levels

		B (mm)																									
		250						500						750						1000							
		v_K (m/s)	V_{zu} (m ³ /h)	MP (m)			V_{zu} (m ³ /h)	MP (m)			V_{zu} (m ³ /h)	MP (m)			V_{zu} (m ³ /h)	MP (m)											
150	min	3	81	22,6	0,01	0,01	0,01	81	22,6	0,02	0,015	0,01	81	22,6	0,02	0,02	0,01	81	22,6	0,04	0,03	0,02	212	58,8	0,06	0,05	0,04
	m	5	136	37,8	0,02	0,02	0,02	136	37,8	0,05	0,04	0,02	136	37,8	0,03	0,02	0,02	136	37,8	0,06	0,04	0,02	353	98,1	0,08	0,06	0,05
	max	7	190	52,8	0,02	0,02	0,02	190	52,8	0,05	0,05	0,03	190	52,8	0,05	0,03	0,03	190	52,8	0,10	0,09	0,04	494	137,2	0,14	0,10	0,09
300	min	3	81	22,6	0,02	0,02	0,01	128	35,6	0,04	0,04	0,02	128	35,6	0,06	0,05	0,04	128	35,6	0,06	0,05	0,04	333	92,4	0,12	0,09	0,06
	m	5	136	37,8	0,05	0,04	0,02	136	37,8	0,09	0,08	0,05	214	59,4	0,06	0,04	0,04	214	59,4	0,14	0,10	0,09	554	153,9	0,27	0,24	0,15
	max	7	190	52,8	0,05	0,05	0,03	190	52,8	0,10	0,09	0,04	300	83,3	0,10	0,06	0,06	300	83,3	0,14	0,10	0,09	776	215,6	0,30	0,27	0,12
450	min	3	81	22,6	0,03	0,015	0,01	128	35,6	0,07	0,03	0,015	128	35,6	0,06	0,05	0,04	128	35,6	0,06	0,05	0,04	333	92,4	0,14	0,10	0,09
	m	5	136	37,8	0,03	0,02	0,01	214	59,4	0,09	0,04	0,02	353	98,1	0,08	0,06	0,05	353	98,1	0,14	0,10	0,09	554	153,9	0,27	0,24	0,15
	max	7	190	52,8	0,05	0,03	0,03	300	83,3	0,10	0,06	0,06	494	137,2	0,14	0,10	0,09	494	137,2	0,14	0,10	0,09	776	215,6	0,30	0,27	0,12
500	min	3	81	22,6	0,04	0,03	0,02	212	58,8	0,06	0,05	0,04	333	92,4	0,12	0,09	0,06	333	92,4	0,12	0,08	0,05	422	117,7	0,12	0,09	0,08
	m	5	136	37,8	0,04	0,02	0,01	214	59,4	0,09	0,04	0,02	353	98,1	0,08	0,06	0,05	353	98,1	0,14	0,10	0,09	554	153,9	0,27	0,24	0,15
	max	7	190	52,8	0,07	0,03	0,02	300	83,3	0,15	0,06	0,04	494	137,2	0,14	0,10	0,09	494	137,2	0,14	0,10	0,09	776	215,6	0,30	0,27	0,12
600	min	3	81	22,6	0,04	0,03	0,02	212	58,8	0,06	0,05	0,04	333	92,4	0,12	0,09	0,06	333	92,4	0,12	0,08	0,05	422	117,7	0,12	0,09	0,08
	m	5	136	37,8	0,09	0,08	0,05	353	98,1	0,08	0,06	0,05	554	153,9	0,27	0,24	0,15	554	153,9	0,27	0,24	0,15	776	215,6	0,31	0,27	0,16
	max	7	190	52,8	0,10	0,09	0,04	494	137,2	0,14	0,10	0,09	776	215,6	0,30	0,27	0,12	776	215,6	0,30	0,27	0,12	984	273,3	0,31	0,27	0,16
750	min	3	128	35,6	0,03	0,02	0,02	212	58,8	0,06	0,05	0,04	333	92,4	0,12	0,08	0,05	422	117,7	0,12	0,08	0,05	554	153,9	0,27	0,24	0,15
	m	5	214	59,4	0,04	0,03	0,03	353	98,1	0,08	0,06	0,05	554	153,9	0,27	0,24	0,15	703	195,3	0,16	0,12	0,10	984	273,3	0,28	0,21	0,18
	max	7	300	83,3	0,07	0,05	0,05	494	137,2	0,14	0,10	0,09	776	215,6	0,31	0,27	0,16	984	273,3	0,28	0,21	0,18	1255	348,6	0,36	0,24	0,16
1000	min	3	128	35,6	0,07	0,03	0,015	333	92,4	0,14	0,06	0,03	422	117,7	0,12	0,09	0,08	753	209,9	0,28	0,12	0,10	1255	348,6	0,36	0,16	0,08
	m	5	214	59,4	0,09	0,04	0,02	554	153,9	0,18	0,08	0,04	703	195,3	0,16	0,12	0,10	1255	348,6	0,28	0,16	0,10	1756	488,3	0,60	0,24	0,16
	max	7	300	83,3	0,15	0,06	0,04	776	215,6	0,30	0,12	0,08	984	273,3	0,28	0,21	0,18	1756	488,3	0,60	0,24	0,16					
		v_{max} (m/s)						v_{max} (m/s)						v_{max} (m/s)						v_{max} (m/s)							

$V_{SUPP\ min}$: $V_k = 3\ m/s < 20\ dB(A)$

$V_{SUPP\ mean}$: $V_k = 5\ m/s = 25\ dB(A)$

$V_{SUPP\ max}$: $V_k = 7\ m/s = 30\ dB(A)$



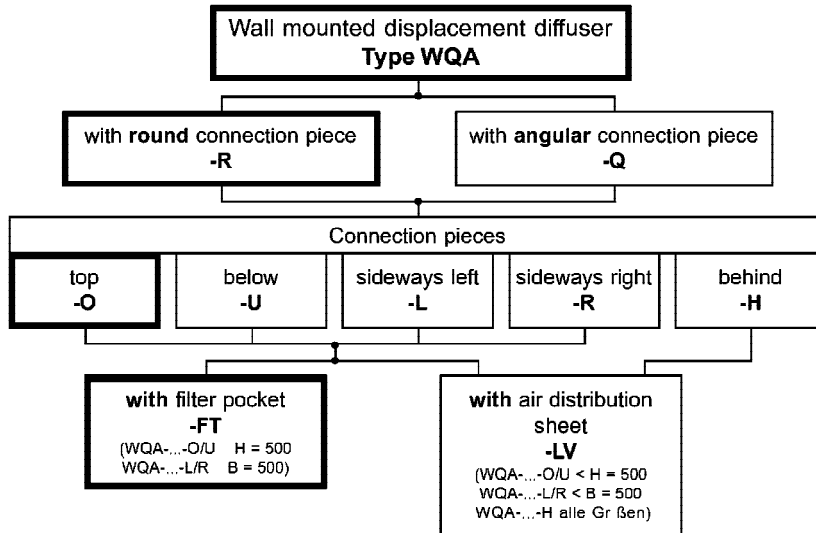
Legend

V_{supp} (m ³ /h)	=	supply air volume	MP (m)	=	measuring point
V_{supp} (l/s)	=	supply air volume	Δp_1 (Pa)	=	pressure loss
v_k (m/s)	=	spigot velocity	B (mm)	=	width
V_{max} (m/s)	=	maximum end velocity	H (mm)	=	height

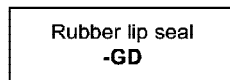
WQA

wall displacement diffuser

Order details



Accessories:



Order example:

WQA-R-U-LV 500 300

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

WQA

wall displacement diffuser

Specification texts

wall displacement diffuser type WQA-R with removable perforated sheet steel faceplate for low velocity air diffusion. casing and perforated face is painted sheet steel RAL 9010 (white), with circular spigot.
Manufacturer: SCHAKO type WQA-R

with rectangular spigot

Manufacturer: SCHAKO type WQA-K

Models:

- WQA-...-O: top entry spigot
- WQA-...-U: bottom entry spigot
- WQA-...-H: back entry spigot
- WQA-...-L: left side entry spigot
- WQA-...-R: right side entry spigot

air distribution:

- with changeable filter pocket (-FT, standard), made from synthetic fibre EU2,

for models:

WQA-...-O/U : > H = 500

WQA-...-L/R : > B = 500

WQA-...-H : not possible

- with integrated sheet steel equalising grid. (-LV) for models:

WQA-...-O/U : < H = 500

WQA-...-L/R : < B = 500

WQA-...-H : all sizes

accessories:

- rubber gasket (-GD)), only for model WQA-R