



Slot Diffuser

DAF

in libraries of
Fluid Desk
Building Information Modeling

FEATURES:

- Adjustable airflow direction
- Aesthetic aluminium material
- Non-standard dimensions upon request



open in
PartShelf24

air handling intelligence

FUNCTION

DAF slot diffuser is designed mainly for installation in ventilation and air-conditioning systems of offices, hotels, shopping centres, restaurants etc.

APPLICATION

DAF may be used both for air supply (DAF-S) and for air exhaustion (DAF-R). In most application it is installed in the ceiling, but may also be used as a wall-mounted diffuser.

DESCRIPTION

DAF diffuser in a standard version has 1, 2, 3 or 4 slots and provides a capacity ranging from 50 to 600 m³/h for a meter of length. Each slot of supply-type diffuser (DAF-S) is equipped with adjustable deflector. With changing its position one can obtain a vertical airflow with the air curtain effect or horizontal flow (along the ceiling), providing optimal conditions of air diffusion in a room and improving comfort for its occupants. The deflectors are operated from outside. The slots of the diffuser used for air exhaustion (DAF-R) are not equipped with deflectors. DAF diffusers are made of aluminium anodized to natural colour. Painting any other RAL colour is available on request. It is also possible to join a number of diffusers to obtain the element length above 2 m.

ACCESSORIES

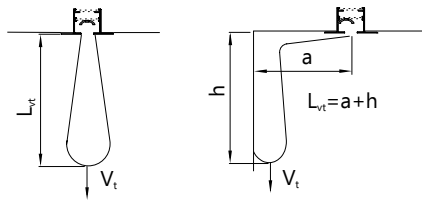
- a plenum box (uninsulated or with thermal/acoustic insulation)
- VFP damper made of perforated or smooth sheet metal, installed in the connection of a plenum box
- RG slot damper installed on the diffuser
- 90° angle element (for the number of slots from 1 to 4)

INSTALLATION

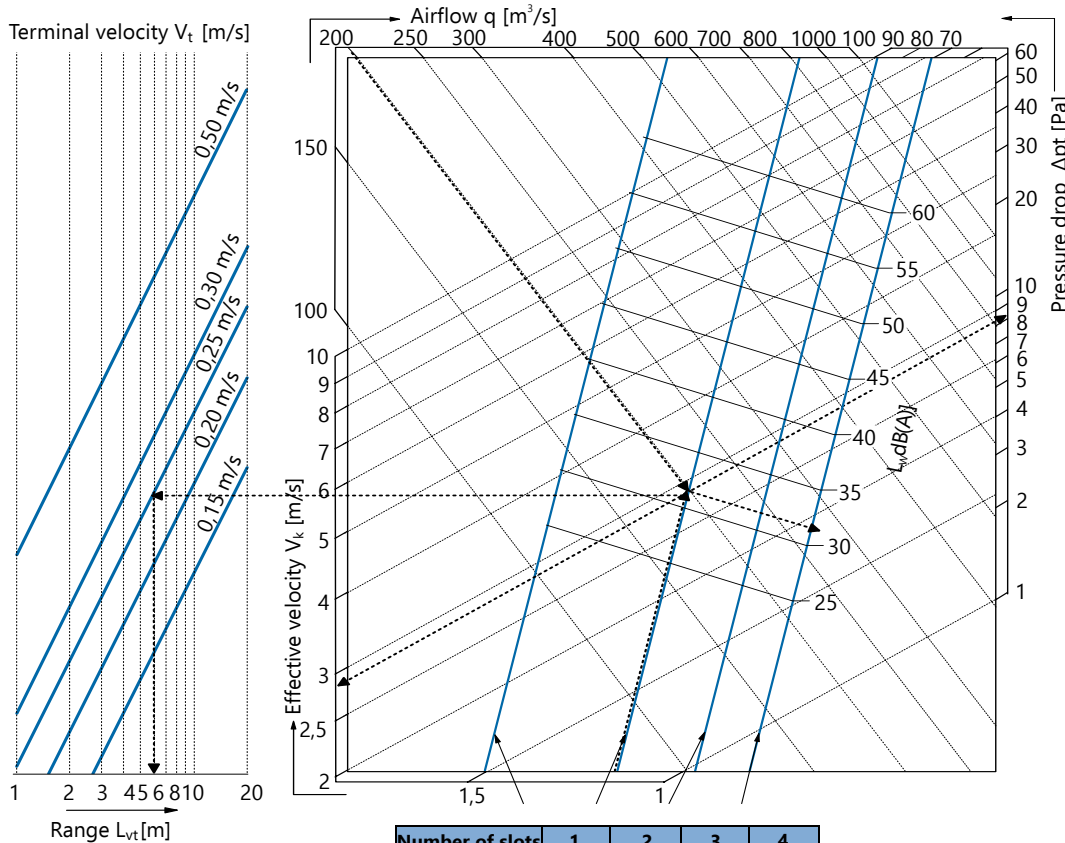
DAF diffuser may be installed directly in the ceiling or with the use of a plenum box (P-DAF). In both cases, the installation of the diffuser is carried out with the use of special brackets..

SELECTION

EXAMPLE OF SELECTION



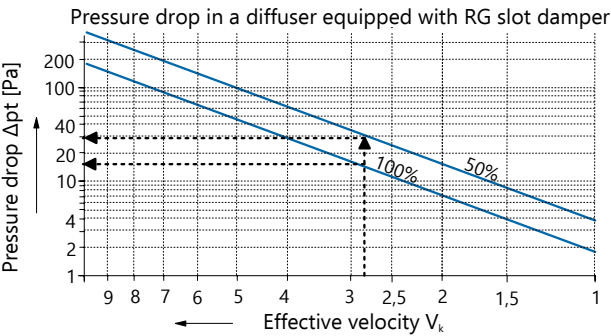
Airflow q 200 m³/h
Number of slots 2
Effective velocity V_k 2,8 m/s
Effective area for 1 m of diffuser length A_k 0,0194 m²/m
Pressure drop Δp_t 8,4 Pa
Airflow range L_{vt} at terminal velocity 0,25 m/s 5,9 m
Sound powelevel L_w 31 dB(A)



Number of slots	1	2	3	4
A_k [m²/m]	0,0097	0,0194	0,0292	0,0389

EXAMPLE OF SELECTION

Effective velocity of supplied airflow 2,8 m/s
Pressure drop in a diffuser equipped with RG slot damper
Opening degree 100 % 14 Pa
Opening degree 50 % 30 Pa





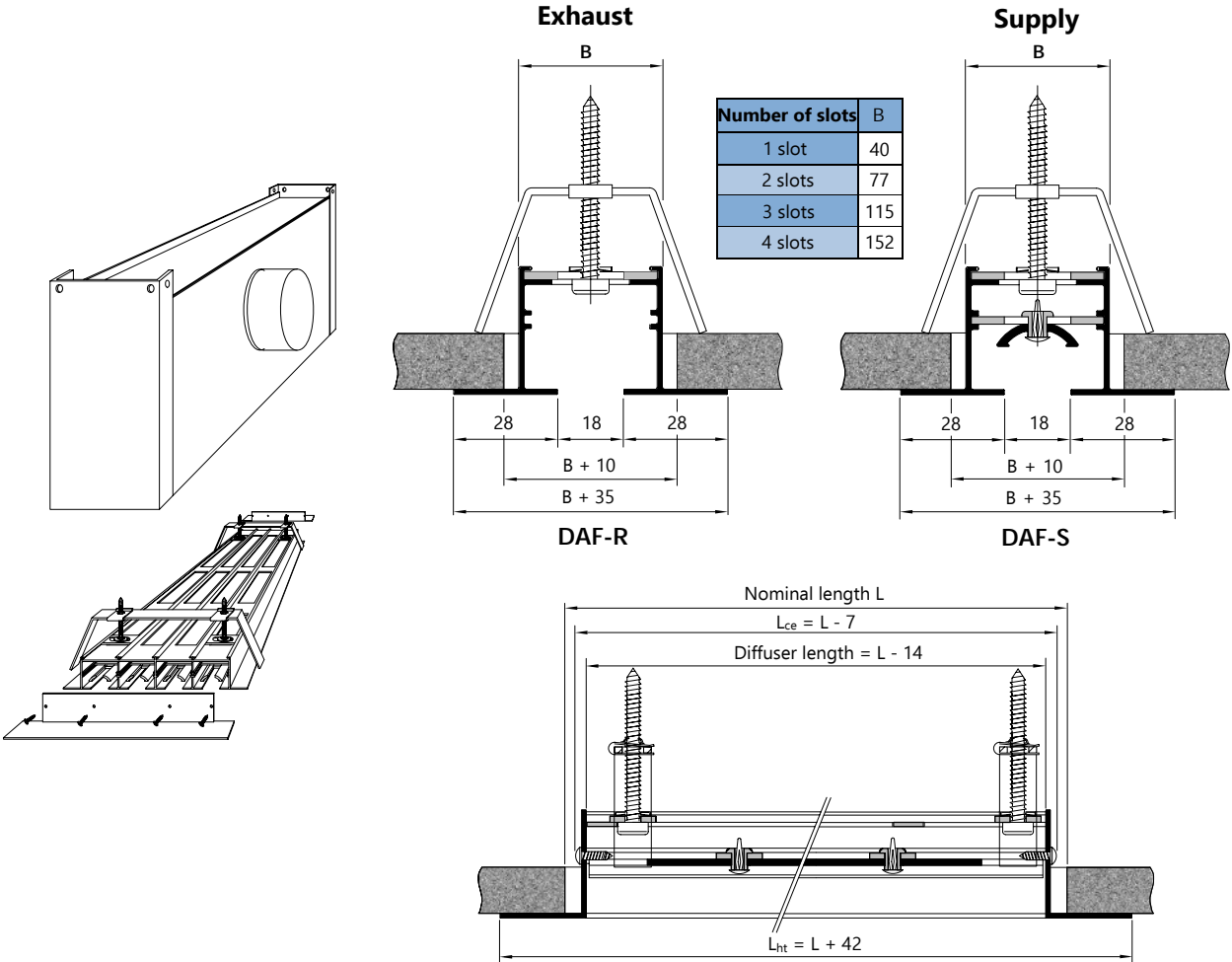
SELECTION

**QUICK SELECTION TABLE OF DAF-S
FOR TERMINAL VELOCITIES 0,25 m/s and 0,5 m/s**

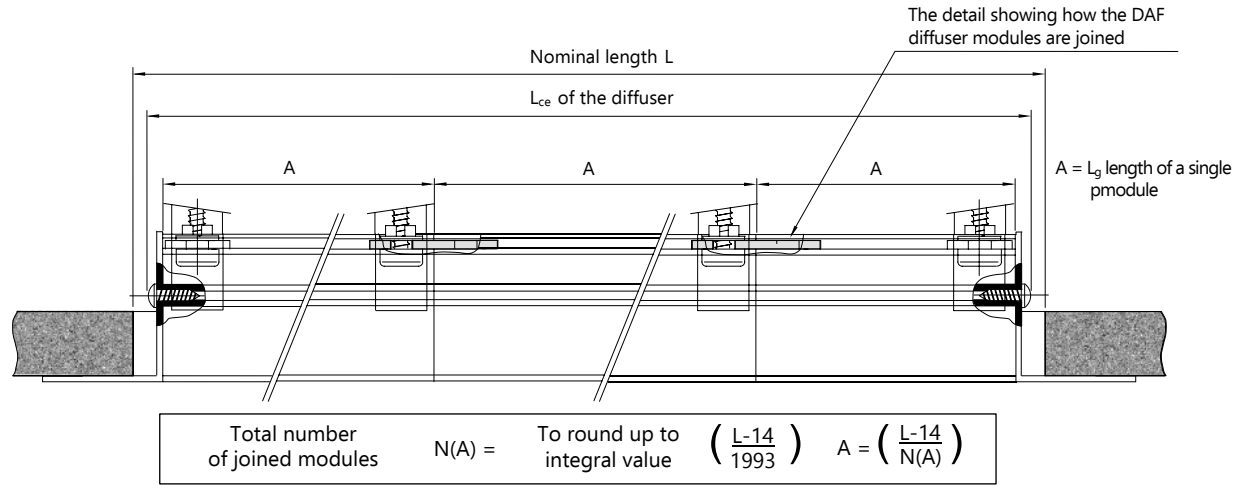
		V_k [m/s] →				Δp_t [Pa] →							
		2 m/s				3 m/s				4 m/s			
		4 Pa				9 Pa				17 Pa			
Number of slots	Nominal length L [mm]	Cap. [m³/h]	Range [m]		L_w [dB(A)]	Cap. [m³/h]	Range [m]		L_w [dB(A)]	Cap. [m³/h]	Range [m]		L_w [dB(A)]
			$L_{0,25}$	$L_{0,5}$			$L_{0,25}$	$L_{0,5}$			$L_{0,25}$	$L_{0,5}$	
1 slot	300	20	1,9	0,5	<20	30	4,2	1,0	<20	40	7,4	1,9	24
	553	38	1,9	0,5	<20	57	4,2	1,0	<20	75	7,4	1,9	27
	600	41	1,9	0,5	<20	61	4,2	1,0	20	82	7,4	1,9	28
	900	62	1,9	0,5	<20	93	4,2	1,0	21	124	7,4	1,9	29
	1000	69	1,9	0,5	<20	103	4,2	1,0	22	138	7,4	1,9	30
	1153	80	1,9	0,5	<20	120	4,2	1,0	22	159	7,4	1,9	30
	1200	83	1,9	0,5	<20	124	4,2	1,0	23	166	7,4	1,9	31
	1500	104	1,9	0,5	<20	156	4,2	1,0	24	208	7,4	1,9	32
	1800	125	1,9	0,5	<20	187	4,2	1,0	24	250	7,4	1,9	32
2 slots	2000	139	1,9	0,5	<20	208	4,2	1,0	25	278	7,4	1,9	33
	300	40	2,9	0,7	<20	60	6,5	1,6	27	80	11,5	2,9	35
	553	75	2,9	0,7	<20	113	6,5	1,6	30	151	11,5	2,9	38
	600	82	2,9	0,7	<20	123	6,5	1,6	31	164	11,5	2,9	38
	900	124	2,9	0,7	21	186	6,5	1,6	32	248	11,5	2,9	40
	1000	138	2,9	0,7	22	207	6,5	1,6	33	276	11,5	2,9	41
	1153	159	2,9	0,7	22	239	6,5	1,6	33	319	11,5	2,9	41
	1200	166	2,9	0,7	22	249	6,5	1,6	34	332	11,5	2,9	42
	1500	208	2,9	0,7	23	312	6,5	1,6	35	416	11,5	2,9	42
3 slots	1800	250	2,9	0,7	24	375	6,5	1,6	35	500	11,5	2,9	43
	2000	278	2,9	0,7	25	417	6,5	1,6	36	556	11,5	2,9	44
	300	60	3,9	1,0	23	90	8,7	2,2	34	120	15,5	3,9	42
	553	113	3,9	1,0	25	170	8,7	2,2	37	226	15,5	3,9	45
	600	123	3,9	1,0	26	184	8,7	2,2	37	246	15,5	3,9	45
	900	186	3,9	1,0	27	279	8,7	2,2	39	372	15,5	3,9	47
	1000	207	3,9	1,0	28	310	8,7	2,2	39	414	15,5	3,9	47
	1153	239	3,9	1,0	29	359	8,7	2,2	40	478	15,5	3,9	48
	1200	249	3,9	1,0	29	373	8,7	2,2	40	498	15,5	3,9	48
4 slots	1500	312	3,9	1,0	30	468	8,7	2,2	41	624	15,5	3,9	49
	1800	375	3,9	1,0	31	562	8,7	2,2	42	750	15,5	3,9	50
	2000	417	3,9	1,0	31	625	8,7	2,2	42	834	15,5	3,9	50
	300	80	4,9	1,2	27	120	11,0	2,8	38	160	19,6	4,9	46
	553	151	4,9	1,2	30	226	11,0	2,8	41	302	19,6	4,9	49
	600	164	4,9	1,2	30	246	11,0	2,8	41	328	19,6	4,9	49
	900	248	4,9	1,2	32	372	11,0	2,8	43	496	19,6	4,9	51
	1000	276	4,9	1,2	32	414	11,0	2,8	44	552	19,6	4,9	52
	1153	319	4,9	1,2	33	478	11,0	2,8	44	637	19,6	4,9	52
	1200	332	4,9	1,2	33	498	11,0	2,8	45	664	19,6	4,9	52
	1500	416	4,9	1,2	34	624	11,0	2,8	45	832	19,6	4,9	53
	1800	500	4,9	1,2	35	750	11,0	2,8	46	1000	19,6	4,9	54
	2000	556	4,9	1,2	36	834	11,0	2,8	47	1112	19,6	4,9	55

DIMENSIONS AND INSTALLATION METHOD

DIFFUSER DIMENSIONS



Modular installation is foreseen for diffuser length L > 2007 mm

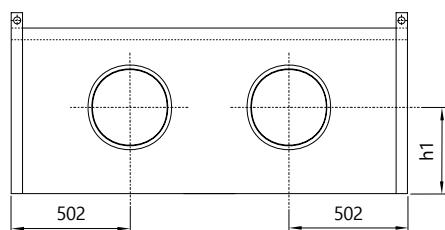




DIMENSIONS AND INSTALLATION METHOD

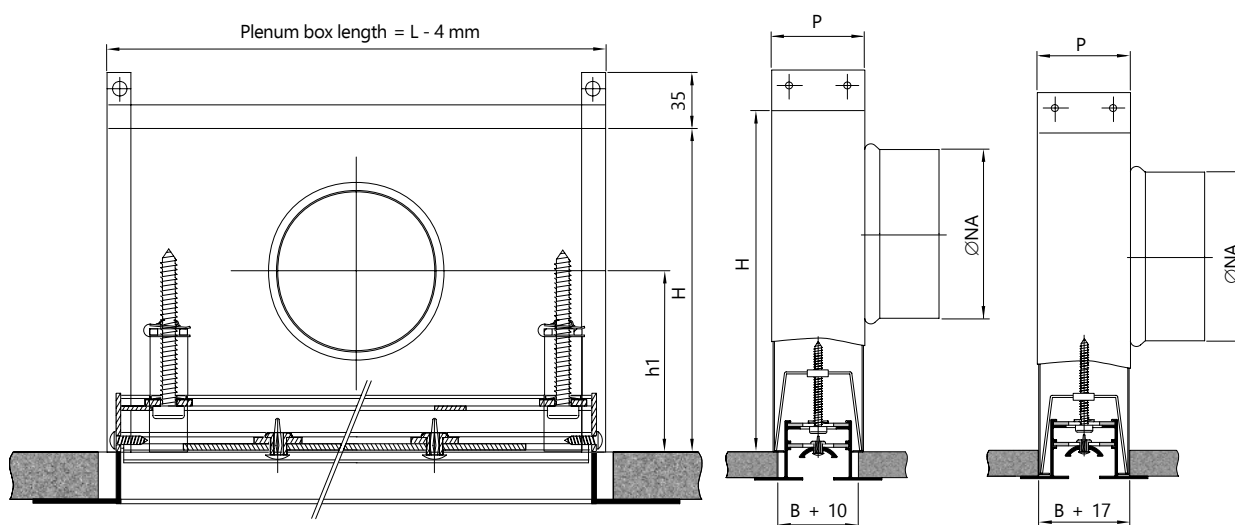
DIMENSIONS OF A PLENUM BOX

Two connectors are needed
for the length of a box $L_g \geq 1500$ mm

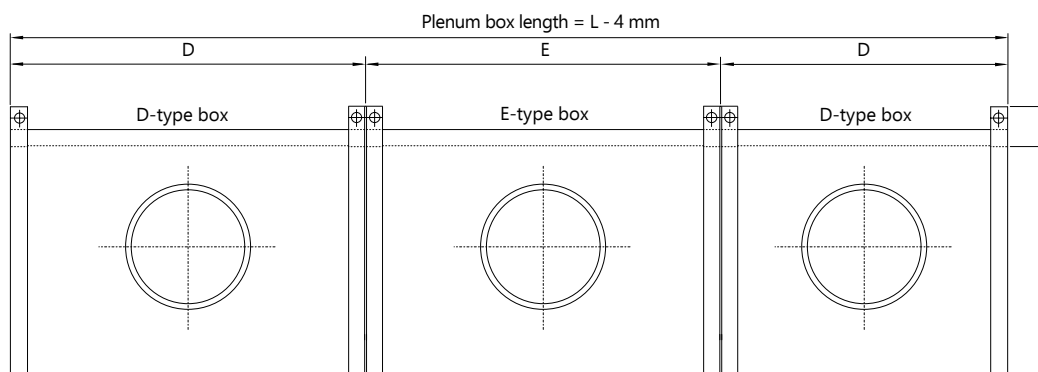


Connectors are supplied in separate
packaging and should be assembled in
a plenum box after the delivery

	Number of slots			
	1	2	3	4
H	200	250	300	350
P	55	92	130	167
NA	125	160	200	250
h1	112	130	150	173



Modular installation is foreseen for diffuser length $L > 2007$ mm



Number
of joined modules $N(T) =$ To round up
to integral value $\left(\frac{L-14}{1993} \right)$

Number
of D-type boxes $N(D) = 2$ $D = \left(\frac{L-14}{N(T)} \right) + 5$

Number
of E-type boxes $N(E) = N(T) - 2$ $E = \left(\frac{L-14}{N(T)} \right)$

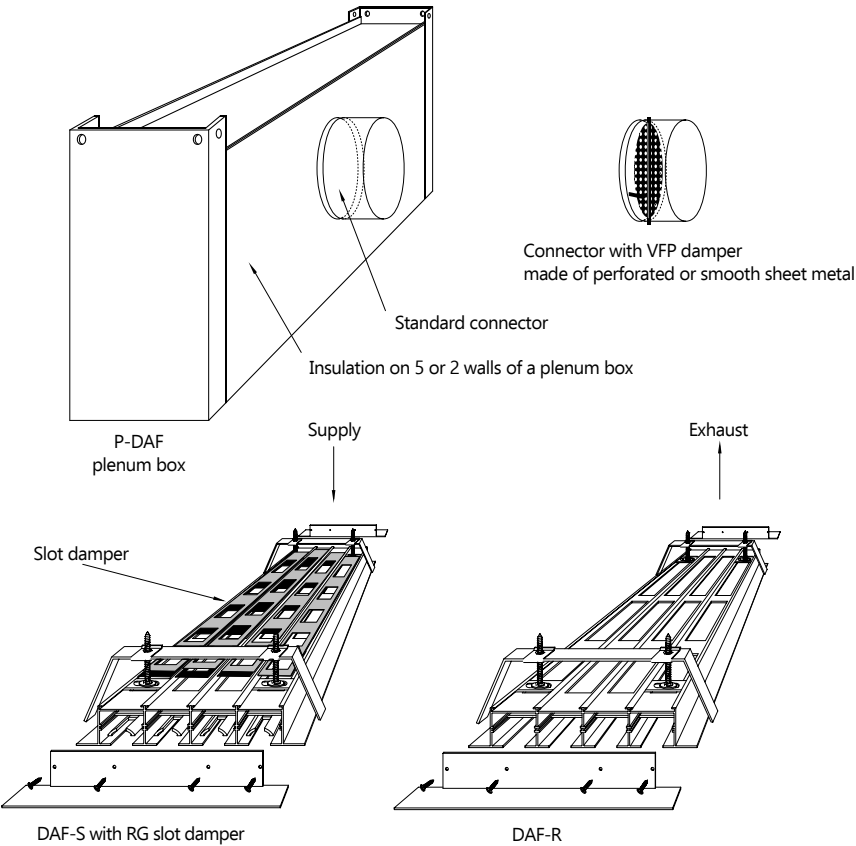
EXAMPLE OF SELECTION FOR THE DIFFUSER AND THE PLENUM BOX OF LENGTH $L = 4500$ mm

L [mm]	N(A)	A [mm]	N(T)	N(D)	D [mm]	N(E)	E [mm]
4500	3	1495,3	3	2	1500,3	1	1495,3

For $L = 4500$ mm: 3 DAFs, length $A = 1495,3$ mm
Two D-type boxes with $D = 1500,3$ mm
One E-type box with $E = 1495,3$ mm

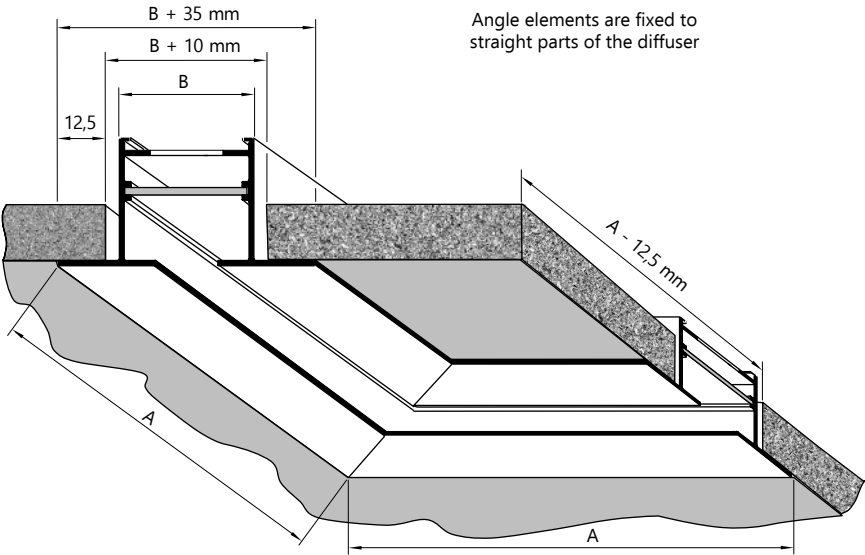
DIMENSIONS AND ACCESSORIES

ACCESSORIES



Angle element

Angle elements are fixed to straight parts of the diffuser



Number of slots	A [mm]	B [mm]
1	94	40
2	132	77
3	169	115
4	207	152

NOTE: In case angle elements are used, the equations for the selection of a number of boxes and diffuser modules are invalid. The adopted solution should be each time consulted with our office

ORDER KEY

DAF - S or R + RG + P-DAF + insulation + VFP / L1153 / 2 slots / Alu. Anod. or 9010

diffuser type supply exhaust plenum box box insulation damper made of perforated sheet metal installed in the connection number of slots type of material RAL colour

slot damper