

Ceiling Diffusers

Adjustable circular diffusers for ceiling tiles



AT 842 series - Aluminium



BR damper

Advantages

- Replaces a 600 x 600 mm suspended ceiling tile.
- Aesthetic design.
- Wide airflow level range.
- Highly simplified adjustment (patented system).
- Easy ceiling fixing using the F16 lugs.

APPLICATION

- Ceiling mounted diffuser designed to replace a 600 x 600 mm suspended ceiling tile (T-shaped framework).
- Adjustable horizontal or vertical air supply diffusion.
- Heating installations ($\Delta T_{\max} = + 30^{\circ} \text{C}$) and air -conditioning ($\Delta T_{\max} = - 16^{\circ} \text{C}$) installations.

DESCRIPTION

- External cone in aluminium and core in pressed steel.
- Adjustable air diffusion by a quick and easy worm screw system (patented).
- Designed from a standard AF 842 diffuser whose outer cone is extended from a compensation plate for 600 x 600 mm ceiling tiles (pressed into one part).
- Fixing to the concealed concrete tile using lugs mounted on the diffuser (F16 fixing).

NOTE: the diffuser weight must not be borne by the frame of the suspended ceiling. Use the suspension cables.

- Connection to circular ducts or the LRE plenum.
- Finish - white epoxy painted steel RAL 9010 tint.

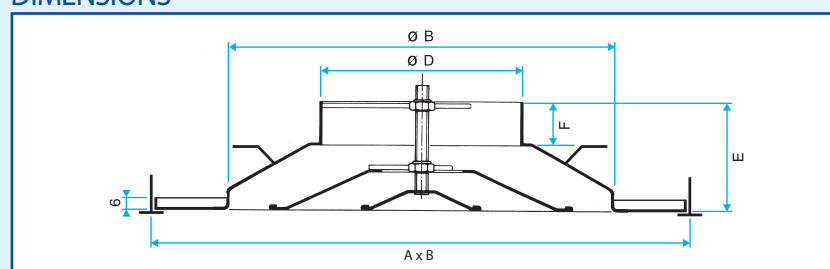
ACCESSORIES

- BR damper: butterfly type with either 2 or 4 V-shaped blades (depending on diameter). Manufactured in steel. Adjusted through the diffuser by direct movement of the blade
- BY damper: butterfly type with either 2 or 4 V-shaped blades (depending on diameter). Manufactured in steel. Adjusted through the diffuser by direct movement of the blades.
- LRE side connection plenum in galvanised steel.

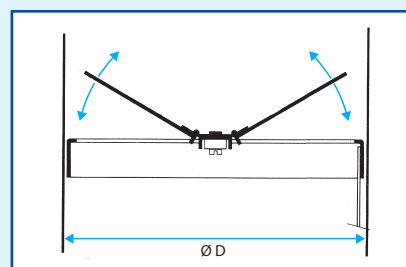
ADDITIONAL RANGE

- Paint finish in accordance with the RAL colour chart (please, consult us).
- LRE insulated connection plenums or with different connection diameters (please, consult us).

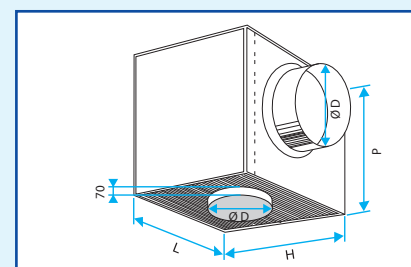
DIMENSIONS



AT 842 diffuser



BR damper



LRE plenum

Comfort airflow levels for $L_w < \text{NR } 35$ and dimensions						
$\varnothing D$ (mm)	A x B* (mm)	$\varnothing B$ (mm)	E (mm)	F (mm)	P (mm)	Airflow (m^3/h)
160	600 x 600	295	110	55	210	250
200	600 x 600	370	120	60	250	400
250	600 x 600	465	135	60	300	650
315	600 x 600	555	150	60	365	900

- * Nominal ceiling tile dimensions.
- For plenum sizes see page 248.
- See selection table on page 286.

RANGE R10

Dimensions	Damper BR Code	Diffuser AT 842 F16 RAL9010 Code	Plenum LRE Side connector Code
$\varnothing 160$	11053220	11051071	11053311
$\varnothing 200$	11053221	11051072	11053312
$\varnothing 250$	11053222	11051073	11053313
$\varnothing 315$	11053223	11051509	11053314

Ceiling Diffusers

Adjustable circular diffusers



AF 842 series - Aluminium



BR damper

Advantages

- Available in two standard finishes.
- Wide airflow level range.
- Highly simplified adjustment (patented system).
- Easy ceiling fixing using the F16 lugs.

APPLICATION

- Adjustable horizontal or vertical air supply diffusion.
- Heating ($\Delta T_{\max} = + 30^{\circ} \text{C}$) and air-conditioning ($\Delta T_{\max} = - 16^{\circ} \text{C}$) installations.
- Ceiling mounted or on exposed ductwork.

DESCRIPTION

- External cone in aluminium and core in pressed steel.
- Adjustable air diffusion by a quick and easy worm screw system (patented).
- Painted in epoxy, white RAL 9010 or coloured alu. RAL 9006.
- Fixing to the concealed concrete tile using lugs mounted on the diffuser (F16 fixing).
- Direct connection on a circular duct or using the LRE plenum.

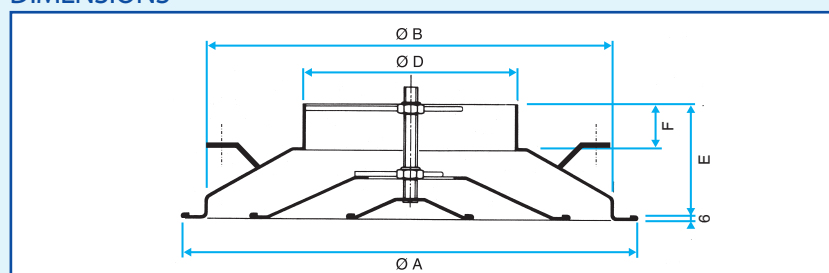
ACCESSORIES

- BR damper: butterfly type with either 2 or 4 V-shaped blades (depending on diameter). Manufactured in steel. Adjusted through the diffuser by direct movement of the blades.
- BY damper: butterfly type with either 2 or 4 V-shaped blades (depending on diameter). Manufactured in steel. Adjusted through the diffuser by direct movement of the blade.
- LRE side connection plenum in galvanised steel.

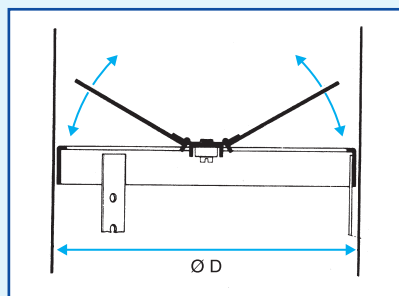
ADDITIONAL RANGE

- Paint finish in accordance with the RAL colour chart (please, consult us).
- LRE insulated connection plenums or with different connection diameters (please, consult us).

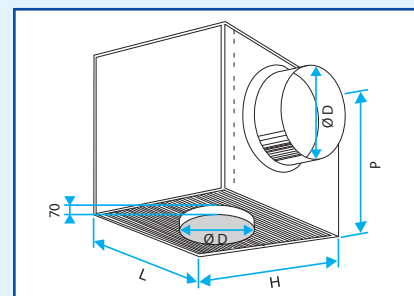
DIMENSIONS



AF 842 diffuser



BR damper



LRE plenum

Comfort airflow levels for $Lw < NR 35$ and dimensions

Ø D (mm)	Ø A (mm)	Ø B (mm)	E (mm)	F (mm)	P (mm)	L x H (mm)	Airflow (m ³ /h)
160	354	295	110	55	210	220 x 220	250
200	428	370	120	50	250	265 x 265	400
250	532	465	135	50	300	315 x 315	650
315	623	555	150	50	365	375 x 375	850
355	730	645	187	75	405	420 x 420	1100
400	776	690	185	78	450	460 x 460	1300
500	909	807	195	79	550	560 x 560	1800
630	1045	950	184	75	680	690 x 690	2500

• See selection table page 286.

RANGE

R10

Dimensions	Damper BR Code	Diffuser AF 842 F16 RAL9006 Code	Diffuser AF 842 F16 RAL9010 Code	Plenum LRE Side connector Code
Ø 160	11053220	11051521	11051060	11053311
Ø 200	11053221	11051522	11051061	11053312
Ø 250	11053222	11051523	11051062	
Ø 315	11053223	11051524	11051063	
Ø 355	11053224	11051525	11051064	11053315
Ø 400	11053225	11051526	11051065	
Ø 500	11053227	11051528	11051067	
Ø 630	11053228	11051529	11051068	

Selection Tables



AF 842 - AT 842 Series

Air supply with ceiling effect

Ak (m ²)	Ø N (mm)	qv (m³/hr)																Lw V _k	Lt Pa											
		200		250		300		400		500		600		800		1000				1250		1500		1750		2000		1600		
0.015	160	25	1.4	30	1.7	36	2.1	45	2.8																			Lw	Lt	
		3.7	14	4.4	20	5.6	33	7.2	54																			Vk	Pa	
0.027	200				18	1.3	23	1.5	30	2.1	36	2.6	42	3.2																
2.5	6.6				3	10	4	17	5	26	6	38																		
0.040	250						15	1.3	22	1.7	27	2.1	33	2.6	41	3.5	50	4.5												
2	4.2						2.7	7.7	3.4	12	4	17	5.6	33	7	52														
0.056	315								15	1.5	20	1.8	25	2.2	34	3	40	3.7	47	4.6										
2	4.2								2.4	6	3	10	4	17	5	26	6.2	40												
0.074	355											20	1.9	25	2.6	34	3.3	42	4.1	47	5									
2.3	5											3	9	3.8	16	4.8	23	5.5	32											
0.090	400													20	2.3	28	3.0	35	3.8	41	4.5									
2.5	6.5													3	9	3.8	16	4.6	22											
0.013	500																	24	3.0	29	3.6	34	4.3	38	4.9	45	6			
2.6	6.9																	3.1	10	3.6	14	4.1	19	5	29					
0.019	630	Lw	Lt																			25	3.5	30	4.1	37	5.1			
Vk	Pa	2.6	6.9																			2.9	8	3.6	14					

The values Lw (NR) do not take the attenuation in the premises into account.

Speed = 0.25 m/s.

Corrections for other terminal velocities

Vt (m/s)	0.25	0.37	0.5
Lt	x 1	x 0.87	x 0.65

Corrections for vertical air supply

V _k (m/s)	Lt (m)				ΔPt (Pa)	Lw (NR)
	ΔT -10°	ΔT 0°	ΔT +10°	ΔT +20°		
x 1.15	x 2	x 1.15	x 0.8	x 0.5	x 1.3	+4