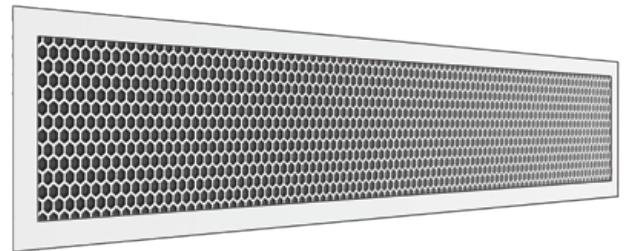


PRODUCT BROCHURE

**SMARTEMP®**  
IN COMFORT



Perforated Multistream Diffuser  
**PMW-AD**

## DESCRIPTION

The SMARTEMP® Perforated Multistream Diffuser, type PMW-AD (figure 1), is a side-wall diffuser that provides high levels of draught-free thermal comfort in such spaces as hotel rooms, apartments, restaurants and commercial offices. The design is both aesthetically pleasing and technically advanced.

Unlike standard side-blow air grilles, which produce broad, low momentum air bundles that mix poorly with room air, the PMW-AD discharges a multitude of individual, high momentum air streams, each one of which is highly inductive. These produce largely uniform temperature distribution with low draught-risk throughout the occupancy space. Thermal comfort levels are high even when airflow rates are high.

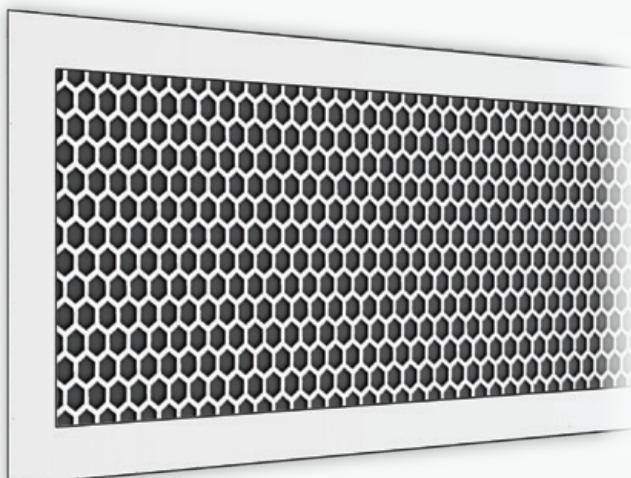


Figure 1

### Mode of Operation

The draught-free air pattern from the diffuser has adjustable throw, spread and discharge direction (up, down, left and right) via the rotatable hexagonal nozzle plates (figure 2).

Four different hexagonal nozzle plate types are used, each with a unique nozzle angle (angles flatten towards the diffuser left and right edges).

Each hexagonal nozzle plate may be rotated through 360 degrees to any one of six positions, thereby providing six possible discharge directions for each of the four nozzle plate types.

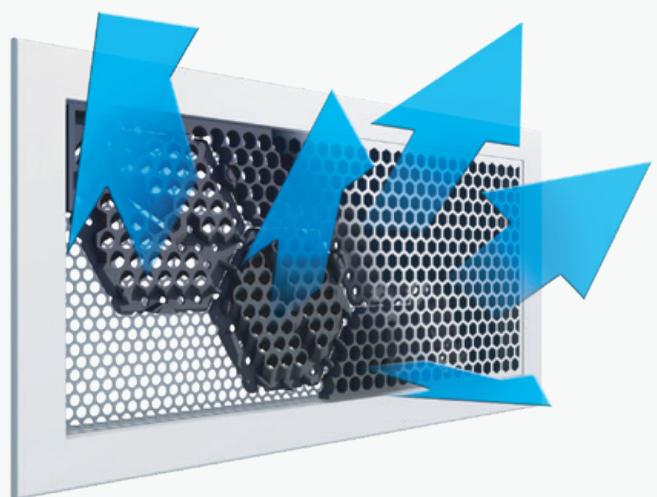


Figure 2

The high momentum air streams discharged by the nozzle plates remain substantially discrete (figure 3) and are highly inductive, inducing both low momentum air discharged by the fixed nozzles around the perimeter of the diffuser, and large quantities of room air.

Rapid temperature equalisation and intense discharge velocity decay occur, bringing about low velocity air motion with uniform temperature distribution throughout the occupancy space.

The discharge direction of each nozzle plate may be rotated via an Allen key inserted through the front face of the diffuser into the centre of the nozzle plate (figure 4).

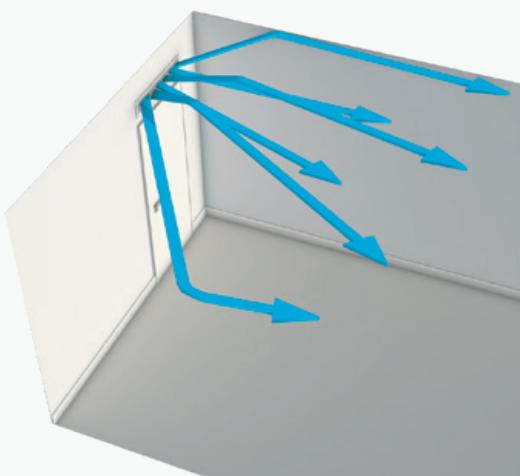


Figure 3

The Allen key shaft aligns with the nozzle plate stream axis to act as a visual indicator of the nozzle plate discharge direction.

Due to its adjustable discharge direction, the diffuser may be located symmetrically or asymmetrically along the wall of the room. Throws of 3 to 9 m for a divergent air pattern, and of 6 to 18 m for a convergent air pattern, are realised, depending on the airflow rate and discharge direction. Thermal comfort is high, due to the uniform temperature distribution of typically  $\pm 1.5$  K and low draught air motion generally below 0.25 m/s in the occupancy space.

Adjustable discharge elements are not included in the return air variant of the diffuser.

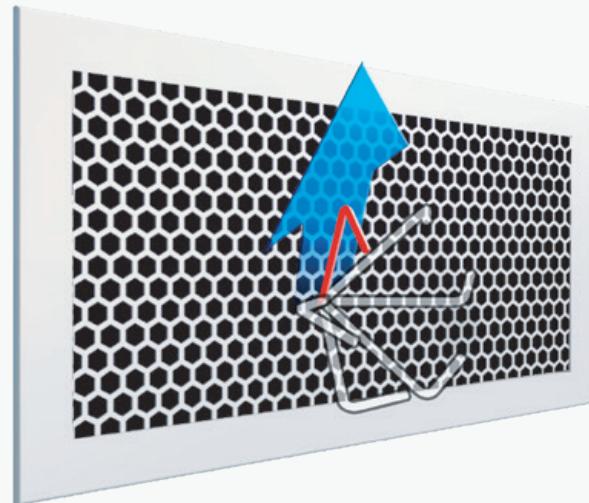


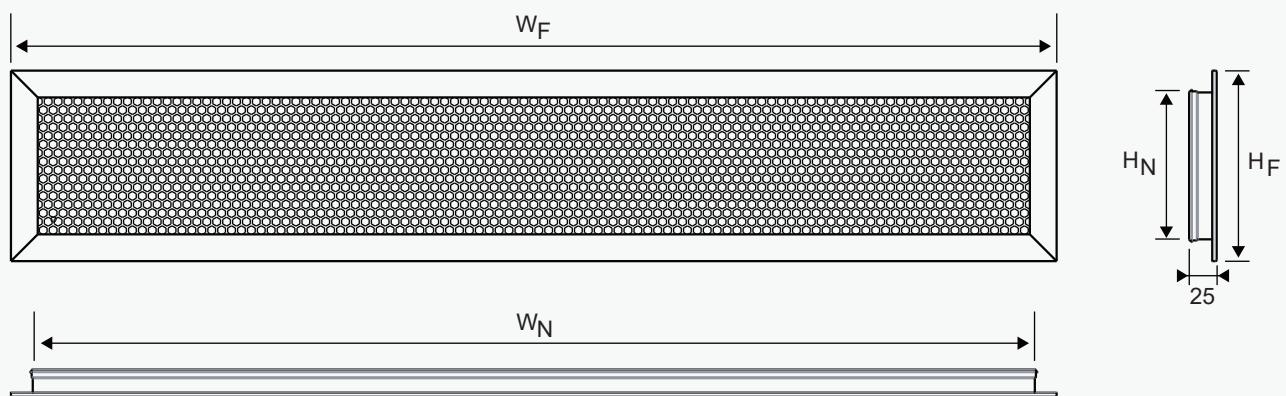
Figure 4

## TECHNICAL DATA

The PMW-AD consists of an aluminium mounting frame surrounding a perforated metal front plate, behind which are located adjustable nozzles, and fixed nozzles. The nozzles are made of black plastic. The fixed nozzles are located along the diffuser perimeter. The adjustable nozzles comprise angled nozzles integrated into rotatable hexagonal nozzle plates.

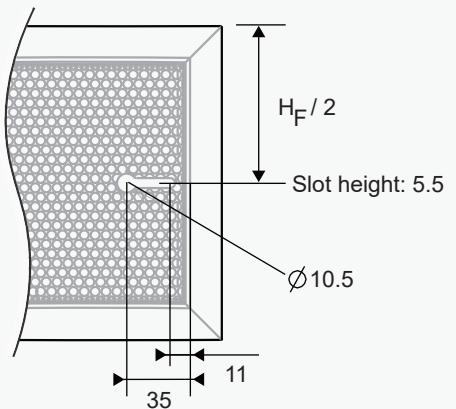
The mounting frame and perforated front face are painted signal white (RAL9003) as standard, though other colours are available on request. The PMW-AD is available as standard in four heights (1, 2, 3 or 4-rows of adjustable nozzles) and in three nominal widths. Bespoke widths are available on request.

### DIFFUSER DIMENSIONS



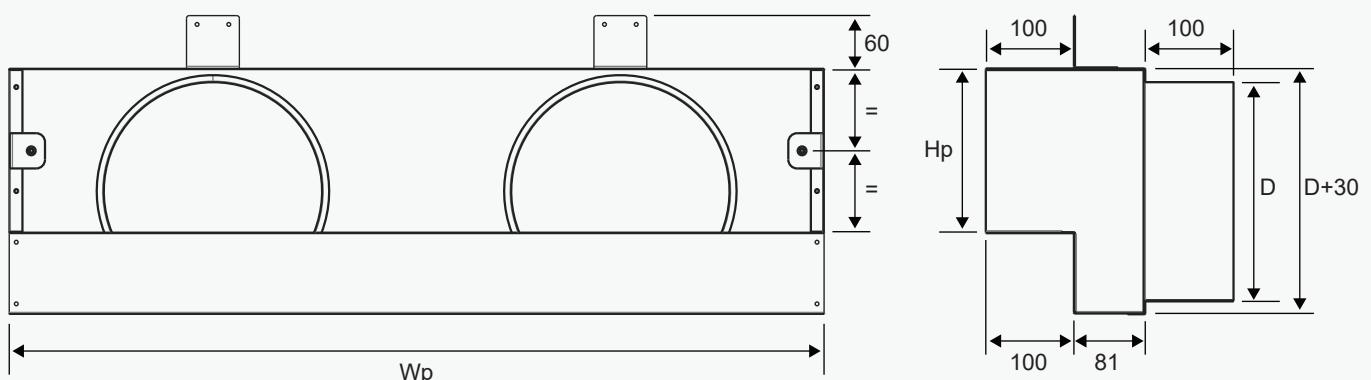
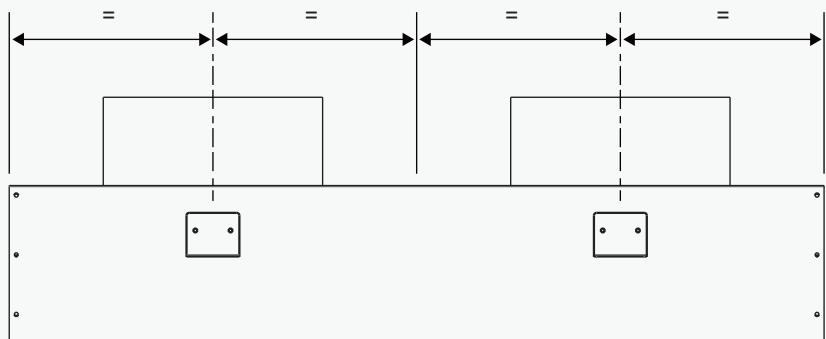
Standard Sizes			Nominal Width					
Height			600		950		1500	
Rows R <sub>H</sub>	W <sub>F</sub>	H <sub>N</sub>	W <sub>F</sub>	W <sub>N</sub>	W <sub>F</sub>	W <sub>N</sub>	W <sub>F</sub>	W <sub>N</sub>
1	134	99						
2	173	138	612	577	950	915	1490	1455
3	212	177						
4	251	216						

Rear view concealed fixing detail



*Products supplied may differ slightly from those described in this technical brochure due to on-going product development.*

## CONNECTION BOX DIMENSIONS



Size	$D$ [mm]	$W_p$ [mm]	$H_p$ [mm]
600-1	2x149	587	109
600-2	2x199	587	148
600-3	2x199	587	187
600-4	2x249	587	226
950-1	2x199	925	109
950-2	2x249	925	148
950-3	2x249	925	187
950-4	2x299	925	226
1500-1	2x249	1465	109
1500-2	2x299	1465	148
1500-3	2x299	1465	187
1500-4	2x349	1465	226

## PMW-AD-DN600

Quick selection guide. Refer to the online selection tool for detailed selections.

$W_N=577\text{mm}$   $W_F=612\text{mm}$

# PERFORMANCE

DN600		ADPI ≥ 90%		V [l/s]		30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	L/s
ROWS		Pt		3.2		5.7	8.9	12.9	17.7	23.2	29.4	36.4	44.2	52.8	62.1																
RH		Throw		Lw		<15	15.5	22.7	28.5	33.5	37.7	41.5	44.9	47.9	50.7	53.3															
Setting		Lp*		<5		<5	7.7	13.5	18.5	22.7	26.5	29.9	32.9	35.7	38.3																
		Hmin		2.12		2.16	2.19	2.23	2.27	2.31	2.35	2.39	2.43	2.47	2.51																
		Lmin		1.3		1.5	1.7	1.9	2.0	2.2	2.3	2.5	2.6	2.7	2.9																
		Lmax		1.9		2.5	3.2	3.8	4.4	4.9	5.6	6.3	6.9	7.1	7.2																
		Short		2.2		2.6	2.9	3.2	3.5	3.7	4.0	4.2	4.5	4.7	5.0																
		Bmin		3.3		4.4	5.5	6.6	7.5	8.5	9.7	10.9	12.0	12.3	12.5																
		Bmax		3.3		7.0	2.2	2.4	2.6	2.8	3.0	3.2	3.4	3.6	3.8																
		Lmin		2.5		3.3	4.2	5.0	5.7	6.5	7.3	8.3	9.1	9.3	9.5																
		Lmax		1.7		2.0	2.2	2.4	2.6	2.8	3.0	3.2	3.4	3.6	3.8																
		Medium		Bmin		2.5	3.3	4.2	5.0	5.7	6.5	7.3	8.3	9.1	9.3	9.5															
		Bmax		1.9		2.5	3.1	3.8	4.3	4.9	5.5	6.2	6.9	7.1	7.2																
		L		Lmin		2.2	2.6	2.9	3.2	3.5	3.7	4.0	4.2	4.5	4.7	4.9															
		Lmax		3.3		4.3	5.4	6.5	7.5	8.5	9.6	10.8	11.9	12.2	12.4																
		Long		Bmin		1.3	1.5	1.7	1.8	2.0	2.2	2.4	2.6	2.7	2.9																
		Bmax		1.9		2.5	3.1	3.8	4.3	4.9	5.5	6.2	6.9	7.1	7.2																

DN600		ADPI ≥ 90%		V [l/s]		30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	L/s
ROWS		Pt		4.5		6.6	9.0	11.8	15.0	18.6	22.5	26.9	31.6	36.8	42.3	48.2	54.5														
RH		Throw		Lw		<15	19.3	24.3	28.5	32.3	35.7	38.7	41.5	44.1	46.5	48.7	50.7	52.7													
Setting		Lp*		<5		<5	9.3	13.5	17.3	20.7	23.7	26.5	29.1	31.5	33.7	35.7	37.7														
		Hmin		2.19		2.23	2.27	2.31	2.35	2.39	2.43	2.47	2.51	2.54	2.58	2.62															
		Lmin		1.7		1.8	2.0	2.1	2.3	2.4	2.5	2.7	2.8	2.9	3.0	3.1	3.3														
		Lmax		2.7		3.2	3.7	4.3	4.8	5.3	5.7	6.3	6.8	7.2	7.2	7.2															
		Short		2.9		3.2	3.4	3.7	4.2	4.4	4.6	4.8	5.0	5.2	5.4	5.6															
		Bmin		4.6		5.6	6.5	7.4	8.3	9.1	10.0	10.9	11.9	12.5	12.5	12.5															
		Bmax		3.5		4.2	4.9	5.6	6.3	6.9	7.6	8.3	9.0	9.5	9.5	9.5															
		Lmin		2.2		2.4	2.6	2.8	3.0	3.2	3.3	3.5	3.7	3.8	4.0	4.1	4.3														
		Lmax		3.5		4.2	4.9	5.6	6.3	6.9	7.6	8.3	9.0	9.5	9.5	9.5															
		Medium		Bmin		2.2	2.4	2.6	3.0	3.2	3.3	3.5	3.7	3.8	4.0	4.1	4.3														
		Bmax		3.5		4.2	4.9	5.6	6.3	6.9	7.6	8.3	9.0	9.5	9.5	9.5															
		L		Lmin		2.9	3.2	3.4	3.7	4.1	4.3	4.6	4.8	5.0	5.2	5.4	5.6														
		Lmax		4.6		5.5	6.4	7.4	8.2	9.0	9.9	10.8	11.8	12.3	12.3	12.3															
		Long		Bmin		1.7	1.8	2.0	2.1	2.3	2.4	2.5	2.6	2.8	2.9	3.0	3.1	3.2													
		Bmax		2.7		3.2	3.7	4.3	4.8	5.2	5.7	6.2	6.8	7.2	7.2	7.2															

Bmin & Bmax: minimum and maximum coverage breadth.  
Lmin & Lmax: minimum and maximum coverage length.

Pt ≤ 20 dB, Lw ≤ 30 dB, Lp ≤ 25 dB, NC\* for 10 dB room absorption

Pt ≤ 20 dB, Lw ≤ 45 dB, Lp ≤ 30 dB, NC\* for 10 dB room absorption

Pt ≤ 20 dB, Lw ≤ 50 dB, Lp ≤ 35 dB, NC\* for 10 dB room absorption

Pt ≤ 20 dB, Lw ≤ 55 dB, Lp ≤ 40 dB, NC\* for 10 dB room absorption

Pt ≤ 20 dB, Lw ≤ 60 dB, Lp ≤ 45 dB, NC\* for 10 dB room absorption

Pt ≤ 20 dB, Lw ≤ 65 dB, Lp ≤ 50 dB, NC\* for 10 dB room absorption

Pt ≤ 20 dB, Lw ≤ 70 dB, Lp ≤ 55 dB, NC\* for 10 dB room absorption

Pt ≤ 20 dB, Lw ≤ 75 dB, Lp ≤ 60 dB, NC\* for 10 dB room absorption

Pt ≤ 20 dB, Lw ≤ 80 dB, Lp ≤ 65 dB, NC\* for 10 dB room absorption

Pt ≤ 20 dB, Lw ≤ 85 dB, Lp ≤ 70 dB, NC\* for 10 dB room absorption

Pt ≤ 20 dB, Lw ≤ 90 dB, Lp ≤ 75 dB, NC\* for 10 dB room absorption

Pt ≤ 20 dB, Lw ≤ 95 dB, Lp ≤ 80 dB, NC\* for 10 dB room absorption

Pt ≤ 20 dB, Lw ≤ 100 dB, Lp ≤ 85 dB, NC\* for 10 dB room absorption

Pt ≤ 20 dB, Lw ≤ 105 dB, Lp ≤ 90 dB, NC\* for 10 dB room absorption

Pt ≤ 20 dB, Lw ≤ 110 dB, Lp ≤ 95 dB, NC\* for 10 dB room absorption

Pt ≤ 20 dB, Lw ≤ 115 dB, Lp ≤ 100 dB, NC\* for 10 dB room absorption

Pt ≤ 20 dB, Lw ≤ 120 dB, Lp ≤ 105 dB, NC\* for 10 dB room absorption

Pt ≤ 20 dB, Lw ≤ 125 dB, Lp ≤ 110 dB, NC\* for 10 dB room absorption

Pt ≤ 20 dB, Lw ≤ 130 dB, Lp ≤ 115 dB, NC\* for 10 dB room absorption

Pt ≤ 20 dB, Lw ≤ 135 dB, Lp ≤ 120 dB, NC\* for 10 dB room absorption

Pt ≤ 20 dB, Lw ≤ 140 dB, Lp ≤ 125 dB, NC\* for 10 dB room absorption

Pt ≤ 20 dB, Lw ≤ 145 dB, Lp ≤ 130 dB, NC\* for 10 dB room absorption

Pt ≤ 20 dB, Lw ≤ 150 dB, Lp ≤ 135 dB, NC\* for 10 dB room absorption

Pt ≤ 20 dB, Lw ≤ 155 dB, Lp ≤ 140 dB, NC\* for 10 dB room absorption

Pt ≤ 20 dB, Lw ≤ 160 dB, Lp ≤ 145 dB, NC\* for 10 dB room absorption

Pt ≤ 20 dB, Lw ≤ 165 dB, Lp ≤ 150 dB, NC\* for 10 dB room absorption

Pt ≤ 20 dB, Lw ≤ 170 dB, Lp ≤ 155 dB, NC\* for 10 dB room absorption

Pt ≤ 20 dB, Lw ≤ 175 dB, Lp ≤ 160 dB, NC\* for 10 dB room absorption

Pt ≤ 20 dB, Lw ≤ 180 dB, Lp ≤ 165 dB, NC\* for 10 dB room absorption

## PMW-AD-DN600

Quick selection guide. Refer to the online selection tool for detailed selections.

$W_N=577\text{mm}$   $W_F=612\text{mm}$

DN600		ADPI ≥ 90%		V [l/s]		30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	L/s
DN600		Pt		4.0		5.4	7.1	9.0	11.2	13.6	16.2	19.1	22.2	25.5	29.1	32.9	36.9	41.2	45.7	50.5	55.5	Pa									
DN600		Throw		Lw		<15	17.4	21.7	25.4	28.8	31.9	34.6	37.2	39.6	41.8	43.8	45.8	47.6	49.3	51.0	52.5	54.0	dB(A)								
Setting		Lp*		<5		6.7	10.4	13.8	16.9	19.6	22.2	24.6	26.8	28.8	30.8	32.6	34.3	36.0	37.5	39.0	NC*										
Hmin		Bmin		2.23		2.27	2.31	2.35	2.39	2.43	2.47	2.51	2.54	2.58	2.62	2.66	2.70	2.74	2.78	2.82	2.86	m									
Lmin		S		1.8		2.0	2.1	2.3	2.4	2.5	2.6	2.7	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	m									
Lmax		Bmax		2.8		3.3	3.8	4.3	4.7	5.2	5.6	6.0	6.5	6.9	7.2	7.2	7.2	7.2	7.2	7.2	7.2	m									
Short		Bmin		3.2		3.4	3.7	4.1	4.3	4.6	4.8	4.9	5.1	5.3	5.5	5.7	5.9	6.1	6.2	6.4	m										
Bmax		Bmax		4.9		5.7	6.5	7.4	8.2	9.0	9.7	10.4	11.2	12.0	12.5	12.5	12.5	12.5	12.5	12.5	12.5	m									
Lmin		Lmax		2.4		2.6	2.8	3.0	3.1	3.3	3.5	3.6	3.8	3.9	4.0	4.2	4.3	4.5	4.6	4.7	4.9	m									
M		Bmin		3.7		4.4	5.0	5.6	6.2	6.8	7.4	7.9	8.5	9.1	9.5	9.5	9.5	9.5	9.5	9.5	9.5	m									
ROWS		Medium		2.4		2.6	2.8	3.0	3.1	3.3	3.5	3.6	3.8	3.9	4.0	4.2	4.3	4.5	4.6	4.7	4.9	m									
Bmax		Bmax		3.7		4.4	5.0	5.6	6.2	6.8	7.4	7.9	8.5	9.1	9.5	9.5	9.5	9.5	9.5	9.5	9.5	m									
Lmin		Lmax		3.1		3.6	4.1	4.3	4.5	4.7	4.9	5.1	5.3	5.5	5.6	5.8	6.0	6.2	6.4	m											
L		Bmin		4.9		5.7	6.5	7.3	8.1	8.9	9.6	10.3	11.1	11.9	12.3	12.3	12.3	12.3	12.3	12.3	12.3	m									
Long		Bmax		1.8		2.0	2.1	2.2	2.4	2.5	2.6	2.7	2.8	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	m									
Bmax		Bmax		2.8		3.3	3.8	4.2	4.7	5.2	5.6	6.0	6.4	6.9	7.2	7.2	7.2	7.2	7.2	7.2	7.2	m									

DN600		Pt		4.0		5.4	7.1	9.0	11.2	13.6	16.2	19.1	22.2	25.5	29.1	32.9	36.9	41.2	45.7	50.5	55.5	Pa						
DN600		Throw		Lw		<15	17.4	21.7	25.4	28.8	31.9	34.6	37.2	39.6	41.8	43.8	45.8	47.6	49.3	51.0	52.5	54.0	dB(A)					
Setting		Lp*		<5		6.7	10.4	13.8	16.9	19.6	22.2	24.6	26.8	28.8	30.8	32.6	34.3	36.0	37.5	39.0	NC*							
Hmin		Bmin		2.23		2.27	2.31	2.35	2.39	2.43	2.47	2.51	2.54	2.58	2.62	2.66	2.70	2.74	2.78	2.82	2.86	m						
Lmin		S		1.8		2.0	2.1	2.3	2.4	2.5	2.6	2.7	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	m						
Lmax		Bmax		2.8		3.3	3.8	4.3	4.7	5.2	5.6	6.0	6.5	6.9	7.2	7.2	7.2	7.2	7.2	7.2	7.2	m						
Short		Bmin		3.2		3.4	3.7	4.1	4.3	4.6	4.8	4.9	5.1	5.3	5.5	5.7	5.9	6.1	6.2	6.4	m							
Bmax		Bmax		4.9		5.7	6.5	7.4	8.2	8.9	9.6	10.3	11.0	11.6	12.3	12.5	12.5	12.5	12.5	12.5	12.5	m						
Lmin		Lmax		2.4		2.6	2.8	3.0	3.1	3.3	3.4	3.6	3.7	3.9	4.0	4.1	4.3	4.4	4.5	4.7	4.9	m						
M		Bmin		3.9		4.5	5.1	5.6	6.2	6.8	7.3	7.8	8.3	8.8	9.3	9.5	9.5	9.5	9.5	9.5	9.5	m						
ROWS		Medium		2.6		2.8	3.0	3.1	3.3	3.4	3.6	3.7	3.9	4.0	4.1	4.3	4.4	4.5	4.7	4.8	4.9	5.0	5.2	5.3	5.4	5.5	m	
Bmax		Bmax		3.9		4.5	5.1	5.6	6.2	6.8	7.3	7.8	8.3	8.8	9.3	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	m
L		Lmin		3.4		4.1	4.3	4.5	4.7	4.9	5.0	5.2	5.4	5.6	5.7	5.9	6.1	6.2	6.4	6.6	6.7	6.9	7.1	7.3	7.5	7.7	7.9	m
L		Lmax		5.1		5.9	6.6	7.3	8.1	8.8	9.5	10.2	10.9	11.5	12.2	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	m
Long		Bmin		2.0		2.1	2.2	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	m
Bmax		Bmax		3.0		3.4	3.8	4.3	4.7	5.1	5.5	5.9	6.3	6.7	7.1	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	m

Bmin & Bmax: minimum and maximum coverage breadth.  
Lmin & Lmax: minimum and maximum coverage length.

Legend

Pt	≤ 20	≤ 30	≤ 40	≤ 50	≤ 55	≤ 60	≤ 65	≤ 70	≤ 75	≤ 80	≤ 85	≤ 90	≤ 95	≤ 100	≤ 105	≤ 110	≤ 115	≤ 120	≤ 125	≤ 130	≤ 135	≤ 140	≤ 145	≤ 150	≤ 155	≤ 160	≤ 165
Lw	≤ 40	≤ 45	≤ 50	≤ 55	≤ 60	≤ 65	≤ 70	≤ 75	≤ 80	≤ 85	≤ 90	≤ 95	≤ 100	≤ 105	≤ 110	≤ 115	≤ 120	≤ 125	≤ 130	≤ 135	≤ 140	≤ 145	≤ 150	≤ 155	≤ 160	≤ 165	
Lp	≤ 25	≤ 30	≤ 35	≤ 40	≤ 45	≤ 50	≤ 55	≤ 60	≤ 65	≤ 70	≤ 75	≤ 80	≤ 85	≤ 90	≤ 95	≤ 100	≤ 105	≤ 110	≤ 115	≤ 120	≤ 125	≤ 130	≤ 135	≤ 140	≤ 145	≤ 150	≤ 155

## PMW-AD-DN950

Quick selection guide. Refer to the online selection tool for detailed selections.

$W_N=915\text{mm}$   $W_F=950\text{mm}$

DN950 ADPI ≥ 90%		$\dot{V} [\text{L/s}]$		50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300	320	340	360	380	$L/\text{s}$		
ROWS		Pt	3.5		5.1	6.9	9.1	11.5	14.3	17.3	20.7	24.3	28.3	32.5	37.1	42.0	47.1	52.6																		
RH		Throw	Lw		<5	15.8	20.7	25.0	28.7	32.1	35.2	38.0	40.5	42.9	45.1	47.2	49.1	50.9	52.7																	
Setting		Lp*	<5		5.7	10.0	13.7	17.1	20.2	23.0	25.5	27.9	30.1	32.2	34.1	35.9	37.7																			
S		Hmin	2.12		2.15	2.17	2.20	2.22	2.25	2.27	2.29	2.32	2.34	2.37	2.39	2.42	2.44	2.47																		
Short		Lmin	1.7		2.0	2.1	2.3	2.4	2.5	2.6	2.8	2.9	3.0	3.1	3.2	3.3	3.4																			
Bmax		Bmin	2.9		3.2	3.4	3.7	4.1	4.4	4.6	4.8	5.0	5.2	5.4	5.6	5.8	6.0																			
M		Lmin	4.3		5.2	6.1	7.0	7.8	8.7	9.4	10.2	11.0	11.7	11.8	12.0	12.2	12.3																			
ROW		Mmax	3.3		4.0	4.6	5.3	5.9	6.6	7.2	7.7	8.4	8.9	9.0	9.1	9.2	9.3																			
L		Bmin	2.2		2.4	2.6	2.8	3.0	3.1	3.3	3.5	3.6	3.8	3.9	4.1	4.2	4.4																			
Bmax		Bmin	3.3		4.0	4.6	5.3	5.9	6.6	7.2	7.7	8.4	8.9	9.0	9.1	9.2	9.3																			
L		Lmax	2.9		3.2	3.4	3.7	4.1	4.3	4.5	4.7	4.9	5.1	5.3	5.5	5.7	5.9																			
Bmin		Long	4.3		5.2	6.0	6.9	7.8	8.6	9.3	10.1	10.9	11.6	11.7	11.8	11.9	12.1	12.2																		
Bmax		Long	1.7		2.0	2.1	2.3	2.4	2.5	2.6	2.7	2.9	3.0	3.1	3.2	3.3	3.4																			
Bmin		Short	2.5		3.0	3.5	4.0	4.5	5.0	5.4	5.9	6.3	6.7	6.8	6.8	6.9	7.0	7.1																		
Bmax		Short	2.5		3.0	3.5	4.0	4.5	5.0	5.4	5.9	6.3	6.7	6.8	6.8	6.9	7.0	7.1																		

DN950 ADPI ≥ 90%		$\dot{V} [\text{L/s}]$		50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300	320	340	360	380	$L/\text{s}$	
ROWS		Pt	3.5		4.6	5.9	7.3	8.8	10.5	12.4	14.4	16.6	18.9	21.4	24.0	26.8	29.7	32.8	36.1	39.5	43.1	46.8													
RH		Throw	Lw		<5	15.8	20.7	25.0	28.7	32.1	35.2	38.0	40.5	42.9	45.1	47.2	49.1	50.9	52.7																
Setting		Lp*	<5		5.7	10.0	13.7	17.1	20.2	23.0	25.5	27.9	30.1	32.2	34.1	35.9	37.7																		
S		Hmin	2.12		2.15	2.17	2.20	2.22	2.25	2.27	2.29	2.32	2.34	2.37	2.39	2.42	2.44	2.47																	
Short		Lmin	1.7		2.0	2.1	2.3	2.4	2.5	2.6	2.8	2.9	3.0	3.1	3.2	3.3	3.4																		
Bmax		Bmin	2.9		3.2	3.4	3.7	4.1	4.3	4.5	4.7	4.9	5.1	5.3	5.5	5.6	5.8																		
M		Lmin	4.3		5.2	6.1	7.0	7.8	8.6	9.3	10.1	10.9	11.7	11.8	11.9	12.1	12.2	12.3																	
ROW		Mmax	3.3		4.0	4.6	5.3	5.9	6.6	7.2	7.7	8.2	8.7	9.2	9.7	10.2	10.7	11.2	11.7	12.2	12.7	13.2	13.7	14.2	14.7	15.2	15.7	16.2	16.7	17.2	17.7	18.2			
Setting		Lp*	<5		7.9	11.0	13.8	16.3	18.7	20.9	23.0	24.9	26.7	28.5	30.1	31.7	33.2	34.6	36.0																
S		Hmin	2.0		2.1	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9				
Short		Lmin	3.4		3.9	4.1	4.3	4.5	4.7	4.9	5.1	5.3	5.5	5.6	5.7	5.8	5.9	6.0	6.2	6.3	6.5	6.6	6.8												
Bmax		Bmin	5.2		5.9	6.6	7.4	8.1	8.8	9.6	10.3	10.9	11.6	12.2	12.5	12.8	13.2	13.5	13.8	14.2	14.5	14.8	15.0	15.2	15.5	15.8	16.1	16.4	16.7	17.0	17.3				
M		Lmin	2.6		2.8	3.0	3.1	3.3																											

## PMW-AD-DN950

Quick selection guide. Refer to the online selection tool for detailed selections.

$W_N=915\text{mm}$   $W_F=950\text{mm}$

DN950   ADPI ≥ 90%		$\dot{V} [\text{L/s}]$		50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300	320	340	360	380	$L/\text{s}$
DN950		Pt		3.5	4.4	5.3	6.4	7.5	8.7	10.0	11.4	12.9	14.5	16.2	17.9	19.8	21.8	23.8	26.0	28.2	30.6	33.0	35.5	38.1	40.9	46.6								
DN950		Lw		<15	16.0	19.1	21.9	24.4	26.8	29.0	31.1	33.0	34.9	36.6	38.2	39.8	41.3	42.7	44.1	45.4	46.6	47.8	49.0	50.1	51.2	53.3								
Setting		Lp*		<5	6.9	9.4	11.8	14.0	16.1	18.0	19.9	21.6	23.2	24.8	26.3	27.7	29.1	30.4	31.6	32.8	34.0	35.1	36.2	38.3										
Hmin				2.22	2.25	2.27	2.29	2.32	2.34	2.37	2.39	2.42	2.44	2.47	2.49	2.52	2.54	2.56	2.59	2.61	2.64	2.66	2.69	2.71	2.74	2.79								
Lmin				2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	4.4									
Lmax				3.4	3.8	4.1	4.5	4.9	5.3	5.6	6.0	6.4	6.7	7.0	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2									
S				3.9	4.1	4.3	4.5	4.7	4.9	5.1	5.2	5.4	5.6	5.7	5.9	6.1	6.2	6.4	6.5	6.8	7.0	7.1	7.3	7.4	7.7									
Bmin				5.9	6.5	7.2	7.8	8.5	9.1	9.8	10.4	11.1	11.7	12.2	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5								
Bmax				3.0	3.1	3.3	3.4	3.6	3.7	3.9	4.0	4.1	4.2	4.4	4.5	4.6	4.7	4.8	5.0	5.1	5.2	5.3	5.4	5.5	5.6									
Lmin				4.4	4.9	5.4	5.9	6.4	6.9	7.4	7.9	8.4	9.3	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5									
Lmax				3.0	3.1	3.3	3.4	3.6	3.7	3.9	4.0	4.1	4.2	4.4	4.5	4.6	4.7	4.8	5.0	5.1	5.2	5.3	5.4	5.5	5.6									
M				4.4	4.9	5.4	5.9	6.4	6.9	7.4	7.9	8.4	9.3	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5									
RCWS				3.9	4.1	4.3	4.5	4.7	4.9	5.0	5.2	5.4	5.5	5.7	5.9	6.0	6.2	6.3	6.5	6.6	6.8	6.9	7.1	7.2	7.4									
Bmin				5.8	6.4	7.1	7.7	8.4	9.0	9.7	10.3	11.0	11.6	12.1	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3									
Bmax				2.2	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	4.4									
L				3.4	3.7	4.1	4.5	4.9	5.2	5.6	6.0	6.3	6.7	7.0	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2									
Bmin				3.7	4.1	4.4	4.7	5.1	5.4	5.7	6.1	6.4	6.8	7.1	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2									
Bmax																																		

DN950   ADPI ≥ 90%		$\dot{V} [\text{L/s}]$		50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300	320	340	360	380	$L/\text{s}$
DN950		Pt		3.6	4.2	5.0	5.8	6.7	7.6	8.6	9.7	10.8	12.0	13.2	14.5	15.9	17.3	18.8	20.4	22.0	23.7	25.5	27.3	31.1	35.2	39.5	44.1	Pa						
DN950		Lw		<15	16.4	18.9	21.3	23.5	25.6	27.5	29.3	31.1	32.7	34.3	35.8	37.2	38.6	39.9	41.1	42.2	43.5	44.6	45.7	47.8	49.7	51.5	53.3	dB(A)						
Setting		Lp*		<5	6.3	8.5	10.6	12.5	14.3	16.1	17.7	19.3	20.8	22.2	23.6	24.9	26.1	27.3	28.5	29.6	30.7	32.8	34.7	36.5	38.3	NC*								
Hmin				2.27	2.29	2.32	2.34	2.37	2.39	2.42	2.44	2.47	2.49	2.52	2.54	2.56	2.59	2.61	2.64	2.66	2.69	2.71	2.74	2.79	2.83	2.93	m							
Lmin				2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.4	4.5	4.7	4.8									
Lmax				3.7	4.1	4.4	4.8	5.1	5.4	5.8	6.1	6.5	6.8	7.1	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2									
S				4.3	4.7	4.9	5.1	5.2	5.4	5.6	5.7	5.9	6.0	6.2	6.3	6.5	6.6	6.8	6.9	7.0	7.2	7.3	7.6	7.8	8.1	m								
Bmin				6.5	7.1	7.6	8.2	8.8	9.4	10.0	10.6	11.2	11.8	12.4	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5							
Bmax				3.3	3.4	3.6	3.7	3.8	4.0	4.1	4.2	4.3	4.5	4.6	4.7	4.8	4.9	5.0	5.1	5.2	5.3	5.4	5.6	5.8	6.0	6.2	6.4	m						
Lmin				4.9	5.4	5.8	6.3	6.7	7.1	7.6	8.0	8.5	8.9	9.4	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5							
Lmax				2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.4	4.5	4.7	4.8									
M				4.9	5.4	5.8	6.3	6.7	7.1	7.6	8.0	8.5	8.9	9.4	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5								
RCWS				3.3	3.4	3.6	3.7	3.8	4.0	4.1	4.2	4.3	4.5	4.6	4.7	4.8	4.9	5.0	5.1	5.2	5.3	5.4	5.6	5.8	6.0	6.2	6.4	m						
Bmin				4.9	5.4	5.8	6.3	6.7	7.1	7.6	8.0	8.5	8.9	9.4	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5							
Bmax				4.3	4.5	4.7	4.8	5.0	5.2	5.3	5.5	5.7	5.8	6.0	6.1	6.4	6.6	6.7	6.8	7.0	7.1	7.2	7.5	7.8	8.0	8.3	m							
Lmin				6.4	7.0	7.6	8.2	8.7	9.3	9.9	10.5	11.1	11.7	12.2	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3								
Lmax				2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.4	4.5	4.7	4.8								
Long				3.7	4.1	4.4	4.7	5.1	5.4	5.7	6.1	6.4	6.8	7.1	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2								
Bmin																																		
Bmax																																		

Bmin & Bmax: minimum and maximum coverage breadth.  
Lmin & Lmax: minimum and maximum coverage length.

Pt ≤ 20 dB  
Lw ≤ 40 dB  
Lp ≤ 25 dB

Pa ≤ 30 Pa  
Lw ≤ 45 Pa  
Lp ≤ 30 Pa

dB(A) ≤ 50 dB(A)  
Lw ≤ 55 dB(A)  
Lp ≤ 35 dB(A)

NC\* ≤ 40 NC\*  
Lw ≤ 55 NC\*  
Lp ≤ 40 NC\*

\* for 10 dB room absorption

Legend

PMW-AD-DN1500

**PMW-AD-DN1500**  $N_N = 1490\text{mm}$   $W_F = 1455\text{mm}$

Quicui selection guide. Refer to the online selection tool for detailed selections.

Bmin & Bmax: minimum and maximum coverage breadth.  
Lmin & Lmax: minimum and maximum coverage length.

## Legend

\* for 10 dB room absorption

PMW-AD-DN1500

Quick selection guide. Refer to the online selection tool for detailed selections.

$$W_N = 1490 \text{mm} \quad W_E = 1455 \text{mm}$$

B<sub>min</sub> & B<sub>max</sub>: minimum and maximum coverage breadth.  
L<sub>min</sub> & L<sub>max</sub>: minimum and maximum coverage length.

<b>Legend</b>	<b>Pt</b>	$\leq 20$	$\leq 30$	$\leq 40$	$\leq 50$	Pa
	<b>Lw</b>	$\leq 40$	$\leq 45$	$\leq 50$	$\leq 55$	dB(A)
	<b>Lp</b>	$\leq 25$	$\leq 30$	$\leq 35$	$\leq 40$	NC*
	* for 10 dB room absorption					

## FEATURES

- Aesthetically appealing uniform perforated design.
- Low smudge risk – reduces cleaning costs.
- Uniform temperature distribution throughout the occupied space.
- Draught-free air supply.
- Quiet operation – suitable for hotel rooms.
- Improved heating performance.
- Suitable for 3 to 9 m throws (airflow rate and discharge direction dependent).
- Suitable for standard and low temperature supply air systems ( $\Delta T_{\text{supply-room}} \leq -12 \text{ K}$ ).
- Suitable for heating up to +10 K
- Suitable for constant flow and VAV systems turning down to 50%.
- Suitable for low pressure fan-coil applications operating at up to 20 Pa, as well as for higher pressure systems.
- Diffuser discharge direction adjustment via Allen key-avoids inadvertent adjustment (eg by cleaners).
- Return air variant excludes adjustable discharge direction elements.

### Sound Power Level and Pressure Drop

The sound power level of the PMW-AD is low, even at high airflow rates. Owing to the lower pressure drop of the diffuser, it is well suited for connection to fan-coil units; furthermore, it lowers the energy consumption of the HVAC system.

### Layout Specifications

The minimum mounting height (from floor to outlet lower edge) is 2 m. The minimum distance from the outlet upper edge to the ceiling is 50 mm. The maximum difference in temperature between the supply and room air is up to -12 K when cooling and up to +10 K when heating.

## ORDER DETAILS

PMW-\_\_\_\_ - \_\_\_\_ - \_\_\_\_ -T \_\_\_\_ - \_\_\_\_ - \_\_\_\_



### ACCESSORIES:

- 0\* = Diffuser only.
- K = With uninsulated connection box.

### FACE COLOUR (painted):

- RAL9003\* (Signal White).
- RAL \_\_\_\_\_ /DUL\_\_\_\_\_.

### DISCHARGE DIRECTION (in direction of airflow):

- L = Left.
- C\* = Centre.
- R = Right.

### THROW:

- S = Short.
- M\* = Medium.
- L = Long.

### ROW HEIGHT ( $R_H$ ):

- 1 = 1 row ( $H_F$  = 134 mm;  $H_N$  = 99 mm).
- 2 = 2 rows ( $H_F$  = 173 mm;  $H_N$  = 138 mm).
- 3 = 3 rows ( $H_F$  = 212 mm;  $H_N$  = 177 mm).
- 4 = 4 rows ( $H_F$  = 251 mm;  $H_N$  = 216 mm).

### NOMINAL WIDTH:

- DN600 ( $W_F$  = 612 mm;  $W_N$  = 577 mm).
- DN950 ( $W_F$  = 950 mm;  $W_N$  = 915 mm).
- DN1500 ( $W_F$  = 1490 mm;  $W_N$  = 1455 mm).

### SUPPLY/RETURN:

- AD\* = Adjustable Direction.
- RA = Return Air.

### MODEL:

- Perforated Multistream Wall Adjustable Diffuser.

### Note:

\* Standard, if no type code entered.

Products supplied may differ slightly from those described in this technical brochure due to on-going product development.

## TENDER TEXT

Furnish and install SMARTTEMP Perforated Multistream Diffusers, type PMW-AD, consisting of:

Front face made of perforated metal, located in an aluminium frame, both painted to the colour specified. Adjustable nozzles (manually rotatable via an Allen key inserted through the front face) made of plastic, located upstream of the front face, produce a multitude of high and low momentum air streams of differing discharge direction. A galvanised perforated inlet plate is located upstream of the nozzles.



For additional information, please contact [info@smartemp.com](mailto:info@smartemp.com)

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