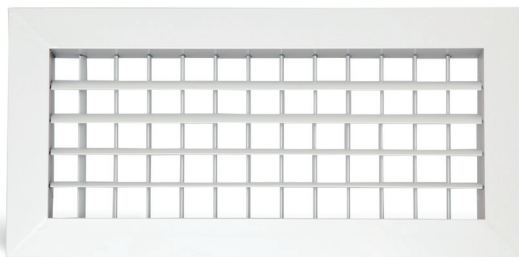


AIRFOIL



GRILLES
DUCT
FITTINGS

making it happen sooner...



DOUBLE DEFLECTION REGISTER (2AR)

Airfoil's Double Deflection Register with Fixed Core is used for supply air functions. The double set of fully adjustable blades gives a high level of control of the air pattern across four directions. Incorporating two sets of individually adjustable blades, the front blades may be adjusted up or down and the rear blades are adjusted side to side.

Made from high-grade extruded aluminium sections to ensure functional strength and performance, Airfoil's Double Deflection Register provides a contemporary attractive feel and modern look. It comes in standard powder coated white with optional colours and finishes available on request.

Double Deflection with Fixed Core Options

- > Flange size: 32mm standard with optional 25mm or 38mm
- > Horizontal blades or vertical blades at the front
- > Blade spacing: 19mm or 25mm
- > Specific colours and finishes available on request
- > Custom-made to any size dimensions

Product specification codes:

2ARH Fixed core double deflection register with front horizontal blades

2ARV Fixed core double deflection register with front vertical blades

Specification: Product code + size.

Example:

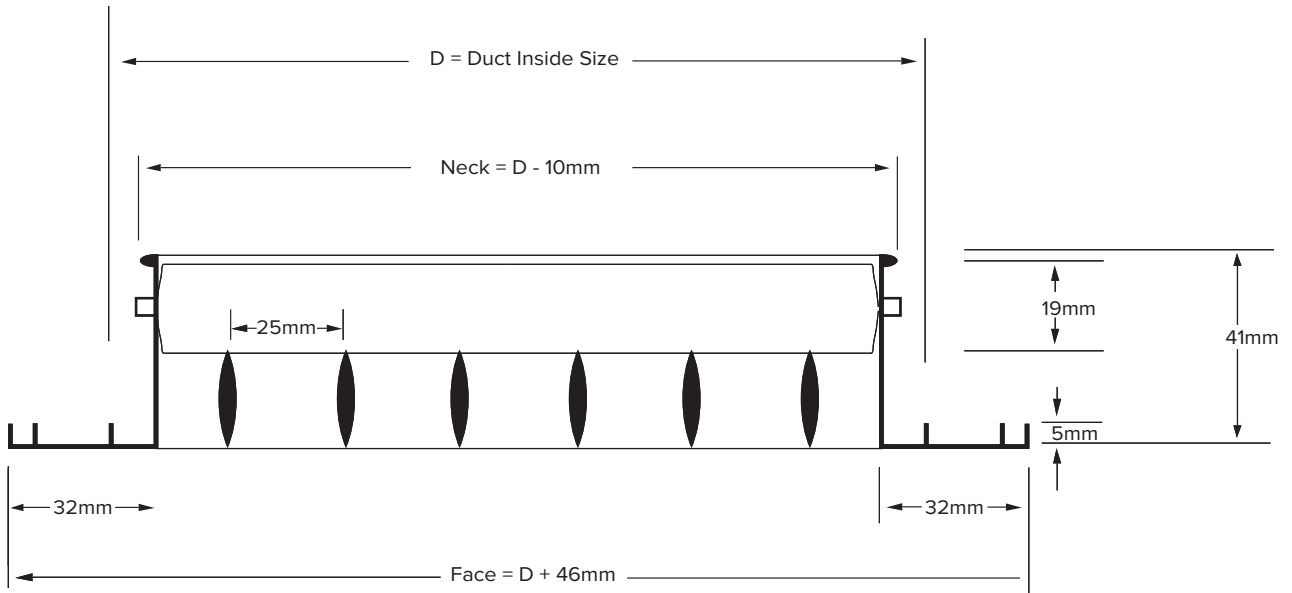
2ARH200x150 Fixed core double deflection register with front horizontal blades; width 200mm x height 150mm

2ARV150x200 Fixed core double deflection register with front vertical blades; height 150mm x width 200mm



DOUBLE DEFLECTION REGISTER

Cross Sectional Diagram: Model 2ARH



DOUBLE DEFLECTION REGISTER (2AR)

Performance Data 25mm Centres

AREA FACTOR		0.17			0.33			0.5			0.66			1.0			1.25		
NECK AREA — M ²		0.023			0.045			0.068			0.090			0.135			0.169		
TYPICAL SIZES		150 X 150			225 X 200			300 X 225			300 X 300			450 X 300			450 X 375		
		225 X 100			300 X 150			450 X 150			400 X 225			600 X 225			675 X 250		
		450 X 100			675 X 100			600 X 150			900 X 150			750 X 225					
SPREAD ANGLE		0° 22½° 45°			0° 22½° 45°			0° 22½° 45°			0° 22½° 45°			0° 22½° 45°			0° 22½° 45°		
47	Throw Metres — min	3.2	2.2	2.0	2.2	1.7	1.4												
	Throw Metres — max	5.1	3.4	2.2	3.4	2.5	2.0												
	Static Pressure — (Pa)	2.5	5.0	7.5	—	—	—												
94	Throw Metres — min	6.2	4.8	3.7	4.3	3.2	2.5	3.4	2.5	2.0	3.2	2.2	1.4						
	Throw Metres — max	9.3	7.1	5.4	6.8	4.8	3.7	5.4	4.0	2.8	4.8	3.4	2.8						
	Static Pressure — (Pa)	10	22.5	32.5	2.5	5	10	—	—	2.5	—	—	—						
141	Throw Metres — min				6.5	4.5	3.7	5.4	3.7	2.8	4.5	3.4	2.2	4.0	2.5	2.0			
	Throw Metres — max				10.3	7.3	5.7	8.2	5.9	4.5	7.3	5.1	4.0	5.7	4.3	3.2			
	Static Pressure — (Pa)				7.5	12.5	20	2.5	5	7.5	—	2.5	5	—	—	—			
189	Throw Metres — min				8.4	6.2	5.1	7.1	5.1	3.7	6.2	4.8	3.4	5.1	3.7	2.5	4.5	3.4	2.4
	Throw Metres — max				13.5	9.8	7.3	10.2	7.9	5.9	9.8	7.1	5.1	7.6	5.7	4.0	7.3	5.3	3.9
	Static Pressure — (Pa)				10	22.5	32.5	5	7.5	12.5	2.5	5	10	—	—	2.5	—	—	—
236	Throw Metres — min							8.1	6.2	5.2	7.6	5.7	4.3	6.2	4.5	3.4	5.7	4.3	3.3
	Throw Metres — max							13.5	9.8	7.3	12.4	9.0	6.5	9.6	7.1	5.4	8.7	6.8	5.1
	Static Pressure — (Pa)							7.5	12.5	20	5	10	12.5	—	2.5	5	—	—	3.5
283	Throw Metres — min							10.4	7.6	5.7	9.3	6.8	4.8	7.6	5.4	4.0	7.1	4.9	3.9
	Throw Metres — max							16.3	11.9	8.7	14.7	10.1	7.9	11.5	7.9	6.2	10.9	7.5	6.0
	Static Pressure — (Pa)							10	17.5	25	7.5	12.5	20	2.5	5	7.5	1.5	4	6
330	Throw Metres — min										11.3	7.9	5.9	8.4	6.2	4.8	8.2	5.9	4.5
	Throw Metres — max										16.9	12.4	9.3	14.1	9.8	7.2	12.7	9.0	6.8
	Static Pressure — (Pa)										10	17.5	25	5	7.5	10	3.5	6.0	9
375	Throw Metres — min										12.4	9.3	6.8	9.6	7.1	5.1	9.3	6.8	4.8
	Throw Metres — max										19.7	14.1	10.3	15.2	10.4	8.2	14.4	10.1	7.7
	Static Pressure — (Pa)										12.5	22.5	32.5	5	7.5	12.5	3.5	6	11
425	Throw Metres — min										14.1	10.1	7.6	10.4	7.6	5.9	10.1	7.3	5.7
	Throw Metres — max										22.3	15.2	11.9	16.9	12.4	9.3	15.8	11.3	8.7
	Static Pressure — (Pa)										15	27.5	40	5	10	15	5	8.5	12.5
472	Throw Metres — min													12.4	8.7	6.5	11.3	8.2	6.2
	Throw Metres — max													18.5	14.1	10.4	17.6	13.1	9.8
	Static Pressure — (Pa)													7.5	12.5	20	6.5	11	15
566	Throw Metres — min													15.8	10.4	7.9	13.9	9.8	7.5
	Throw Metres — max													22.6	16.9	12.2	20.8	15.8	11.9
	Static Pressure — (Pa)													10	17.5	25	8.5	14	22.5
660	Throw Metres — min													16.9	12.2	9.3	16.6	11.6	8.7
	Throw Metres — max													27.3	19.7	14.1	25.2	18.2	13.6
	Static Pressure — (Pa)													12.5	25	35	11	20	30
755	Throw Metres — min																17.8	13.4	10.1
	Throw Metres — max																29.8	21.8	15.9
	Static Pressure — (Pa)																14	25	37.5
850	Throw Metres — min																		
	Throw Metres — max																		
	Static Pressure — (Pa)																		
944	Throw Metres — min																		
	Throw Metres — max																		
	Static Pressure — (Pa)																		
1180	Throw Metres — min																		
	Throw Metres — max																		
	Static Pressure — (Pa)																		
1416	Throw Metres — min																		
	Throw Metres — max																		
	Static Pressure — (Pa)																		
1888	Throw Metres — min																		
	Throw Metres — max																		
	Static Pressure — (Pa)																		
	Throw Metres — min																		

DOUBLE DEFLECTION REGISTER (2AR)

Performance Data 25mm Centres

AREA FACTOR		1.33	1.5	1.66	2.0	2.5	2.66
NECK AREA — M ²		0.180	0.203	0.225	0.270	0.338	0.360
TYPICAL SIZES		600 x 300 900 x 200 1200 x 150	450 x 450 675 x 300 900 x 225	600 x 375 750 x 300 1500 x 150	600 x 450 900 x 300 1200 x 225	750 x 450 900 x 375 1125 x 300	600 x 600 800 x 450 1200 x 300
SPREAD ANGLE		0° 22½° 45°	0° 22½° 45°	0° 22½° 45°	0° 22½° 45°	0° 22½° 45°	0° 22½° 45°
141	Throw Metres — max Static Pressure — (Pa)						
189	Throw Metres — min Throw Metres — max Static Pressure — (Pa)	4.3 3.2 2.2 6.8 5.0 3.8 — — —					
236	Throw Metres — min Throw Metres — max Static Pressure — (Pa)	5.4 4.0 3.2 8.7 6.2 5.2 — — 2.5	4.3 3.2 2.5 6.8 4.8 3.7 — — —				
283	Throw Metres — min Throw Metres — max Static Pressure — (Pa)	6.5 4.5 3.7 10.4 7.3 4.8 — 2.5 5	5.9 4.3 3.2 9.3 7.1 4.8 — — 2.5	5.3 3.8 3.0 8.4 5.8 4.5 — — —	4.8 3.7 2.8 7.9 5.4 4.3 — — —		
330	Throw Metres — min Throw Metres — max Static Pressure — (Pa)	7.6 5.7 4.3 11.9 8.7 6.5 2.5 5 7.5	6.8 4.8 3.7 10.4 7.6 5.9 — 2.5 5	6.2 4.5 3.4 9.8 6.5 5.1 — — 2.5	5.9 4.3 3.2 9.3 7.1 4.8 — — 2.5		
375	Throw Metres — min Throw Metres — max Static Pressure — (Pa)	9.0 6.5 4.5 13.5 9.8 7.4 2.5 5 10	8.2 5.7 4.3 12.9 9.0 6.8 1.5 4 6	7.3 5.4 4.0 11.2 7.9 6.4 — 2.5 5	6.8 4.8 3.7 10.4 6.6 5.7 — — 2.5	6.2 4.3 3.3 9.4 6.6 5.1 — — —	5.9 4.0 3.2 8.7 6.2 4.8 — — —
425	Throw Metres — min Throw Metres — max Static Pressure — (Pa)	9.8 7.1 5.4 15.2 10.8 8.4 5 7.5 10	9.0 6.2 4.8 14.1 9.8 7.3 2.5 5 7.5	8.2 5.7 4.3 12.9 9.0 6.8 1.5 4 6	7.6 5.7 4.0 11.9 8.7 6.5 — 2.5 5	6.9 4.9 3.6 10.8 7.7 5.8 — — 3	6.5 4.5 3.4 10.4 7.1 5.4 — — 2.5
472	Throw Metres — min Throw Metres — max Static Pressure — (Pa)	10.8 7.9 5.9 17.1 12.4 9.3 5 10 12.5	9.8 7.1 5.4 15.2 11.3 8.4 1.5 5 10	9.0 6.5 4.9 14.4 10.4 7.9 2.5 5 7	8.4 6.2 4.5 13.5 9.6 7.1 — 2.5 5	8.0 6.2 4.5 13.5 9.6 7.1 — 2.5 5	7.6 5.1 3.7 11.9 8.2 6.5 — — 2.5
566	Throw Metres — min Throw Metres — max Static Pressure — (Pa)	13.0 9.6 7.3 20.2 15.2 11.3 7.5 12.5 20	11.9 8.7 6.5 18.5 13.5 9.9 5 7.5 12.5	10.9 8.2 6.2 17.2 12.1 9.1 2.5 5 10	10.1 7.6 5.7 15.8 11.3 8.4 2.5 5 7.5	9.7 7.1 5.3 14.7 10.6 8.1 1.5 4 6	9.6 6.8 5.1 14.1 10.1 7.8 — 2.5 5
660	Throw Metres — min Throw Metres — max Static Pressure — (Pa)	16.3 11.3 8.4 23.7 17.4 13.0 10 17.5 25	14.1 9.8 7.3 21.3 15.2 11.9 5 10 15	13.8 9.6 7.1 20.8 15.0 11.6 5 7.5 12.5	13.5 9.6 6.9 20.2 14.8 11.3 5 7.5 10	11.7 8.4 6.6 18.0 13.2 10.1 3.5 6 9	10.6 7.9 6.2 16.9 12.1 9.3 2.5 5 7.5
755	Throw Metres — min Throw Metres — max Static Pressure — (Pa)	17.4 13.0 9.6 28.4 19.7 15.2 12.5 22.5 32.5	15.2 11.9 8.2 24.9 18.0 13.5 7.5 12.5 20	14.1 10.1 7.7 22.2 16.3 12.1 5 10 15	13.5 9.6 7.3 20.8 15.2 11.3 5 7.5 12.5	12.8 9.4 6.9 20.2 14.6 10.6 3.5 6 11	12.4 8.9 6.8 19.7 14.1 10.1 2.5 5 7.5
850	Throw Metres — min Throw Metres — max Static Pressure — (Pa)	19.7 14.7 10.6 30.4 22.6 16.9 15 27.5 40	17.4 13.0 9.6 28.9 19.7 14.7 10 17.5 25	16.0 12.1 8.7 25.5 17.7 13.8 7.5 12.5 20	15.2 10.8 8.2 23.7 16.9 13.0 7.5 10 15	14.7 10.4 7.7 23.1 16.1 12.4 5 8.5 12.5	14.1 10.1 7.4 22.6 15.6 11.7 5 7.5 10
944	Throw Metres — min Throw Metres — max Static Pressure — (Pa)		19.7 14.1 10.8 31.3 22.6 16.7 12.5 22.5 32.5	18.0 13.0 9.9 27.9 20.4 15.2 10 17.5 25	16.9 11.9 9.0 26.1 18.5 14.1 17.5 12.5 20	15.9 11.3 8.7 25.1 16.8 13.6 6.5 11 15	15.4 11.0 8.4 24.5 16.9 13.3 5 7.5 12.5
1180	Throw Metres — min Throw Metres — max Static Pressure — (Pa)			21.4 15.8 11.9 32.6 25.2 19.5 12.5 22.5 32.5	20.8 15.2 11.3 31.5 23.7 18.1 10 20 30	20.1 14.6 11.0 30.5 22.9 16.9 8.5 14 22.5	18.4 13.9 10.7 29.8 22.6 16.3 7.5 12.5 20
1416	Throw Metres — min Throw Metres — max Static Pressure — (Pa)				24.7 18.4 13.4 38.2 28.2 20.8 15 27.5 40	23.4 17.2 13.1 35.2 26.8 19.5 12.5 22.5 32.5	22.6 16.6 12.5 33.7 26.1 18.7 10 17.5 25
1888	Throw Metres — min Throw Metres — max Static Pressure — (Pa)						29.9 17.8 13.4 42.9 31.7 25.4 15 27.5 40
2360	Throw Metres — min Throw Metres — max Static Pressure — (Pa)						

DOUBLE DEFLECTION REGISTER (2AR)

Performance Data 25mm Centres

AREA FACTOR		3.0	4.0	5.0	6.0	8.15
NECK AREA — M ²		0.405	0.540	0.675	0.810	1.10
TYPICAL SIZES		675 x 600 900 x 450	900 x 600 1200 x 450 1800 x 300	900 x 750 1500 x 450	900 x 900 1350 x 600 1800 x 450	1050 x 1050
SPREAD ANGLE		0° 22½° 45°	0° 22½° 45°	0° 22½° 45°	0° 22½° 45°	0° 22½° 45°
189	Throw Metres — max Static Pressure — (Pa)					
236	Throw Metres — min Throw Metres — max Static Pressure — (Pa)					
283	Throw Metres — min Throw Metres — max Static Pressure — (Pa)					
330	Throw Metres — min Throw Metres — max Static Pressure — (Pa)					
375	Throw Metres — min Throw Metres — max Static Pressure — (Pa)					
425	Throw Metres — min Throw Metres — max Static Pressure — (Pa)	6.2 4.3 3.4 9.8 6.8 5.1 — — —				
472	Throw Metres — min Throw Metres — max Static Pressure — (Pa)	7.1 4.8 3.4 10.6 7.6 5.9 — — —				
566	Throw Metres — min Throw Metres — max Static Pressure — (Pa)	8.2 6.2 4.5 13.0 9.3 7.1 — — 2.5	6.8 4.8 3.7 10.4 7.6 5.7 — — —			
660	Throw Metres — min Throw Metres — max Static Pressure — (Pa)	9.8 7.1 5.1 15.2 11.3 8.4 — 2.5 5	7.6 5.7 4.3 12.4 8.7 6.5 — — 2.5			
755	Throw Metres — min Throw Metres — max Static Pressure — (Pa)	11.3 8.2 6.2 17.4 13.0 9.6 — 2.5 5	8.7 6.5 4.8 14.1 9.8 7.6 — — 2.5			
850	Throw Metres — min Throw Metres — max Static Pressure — (Pa)	13.0 9.0 6.8 19.7 14.1 10.4 2.5 5 7.5	10.1 7.3 5.7 15.2 11.3 8.5 — 2.5 5	8.9 6.8 5.1 14.1 10.4 8.2 — — 2.5	8.4 6.2 4.0 13.5 9.8 7.6 — — —	
944	Throw Metres — min Throw Metres — max Static Pressure — (Pa)	14.1 10.1 7.3 21.1 15.8 11.9 2.5 5 10	11.9 7.9 5.9 16.9 12.4 9.3 — 2.5 5	10.6 7.5 5.7 15.7 11.5 8.9 — — 2.5	9.8 7.1 5.4 15.2 10.9 8.4 — — —	
1180	Throw Metres — min Throw Metres — max Static Pressure — (Pa)	17.4 12.6 9.6 27.1 19.7 14.7 5 10 12.5	14.1 9.8 7.6 21.7 15.2 11.9 2.5 5 7.5	13.1 9.6 7.3 20.1 14.3 10.9 — 2.5 5	12.4 9.2 7.1 18.4 13.4 10.4 — — 2.5	10.1 7.1 5.4 15.2 10.1 8.1 — — —
1416	Throw Metres — min Throw Metres — max Static Pressure — (Pa)	20.2 15.5 13.3 31.5 23.7 17.4 7.5 12.5 20	16.9 11.9 9.0 24.3 19.3 14.1 5 10 12.5	15.9 11.2 8.4 23.5 17.7 13.5 2.5 5 7.5	14.7 10.6 8.2 22.6 16.9 13.0 — 2.5 5	11.9 8.4 6.5 18.5 13.5 9.8 — — 2.5
1888	Throw Metres — min Throw Metres — max Static Pressure — (Pa)	28.2 17.4 12.7 40.8 30.4 23.7 12.5 22.5 32.5	23.0 15.8 11.9 34.1 24.8 18.5 9.5 12.5 20	20.2 14.9 11.0 32.2 22.9 17.7 5 7.5 12.5	18.5 14.1 10.6 30.4 21.1 16.9 2.5 5 7.5	15.6 11.3 8.4 24.5 18.0 14.5 — 2.5 5
2360	Throw Metres — min Throw Metres — max Static Pressure — (Pa)		28.2 17.8 15.2 42.6 30.6 23.2 12.5 22.5 32.5	27.0 17.4 14.6 38.8 28.7 21.4 7.5 12.5 20	26.1 16.8 14.1 34.8 28.2 20.2 5 10 12.5	19.7 14.1 10.6 30.4 22.6 16.9 2.5 5 7.5

DOUBLE DEFLECTION REGISTER (2AR)

Neck areas for supply registers

Nominal Height mm	150	225	300	375	450	525	600	675	750	825	900	975	1050
Nominal Length mm													
150	.023												
225	.038	.051											
300	.045	.068	.090										
375	.056	.084	.113	.141									
450	.068	.101	.136	.169	.203								
525	.079	.118	.158	.197	.236	.276							
600	.090	.135	.180	.225	.270	.315	.360						
675	.101	.152	.203	.253	.304	.354	.405	.456					
750	.113	.169	.225	.281	.338	.393	.450	.506	.563				
825	.124	.186	.248	.309	.371	.433	.495	.557	.618	.681			
900	.135	.203	.270	.338	.405	.473	.540	.607	.675	.743	.810		
975	.146	.219	.293	.366	.439	.512	.585	.658	.731	.804	.878	.951	
1050	.158	.236	.315	.394	.473	.551	.630	.709	.788	.866	.945	1.024	1.100

Core areas for supply registers

Nominal Height mm	150	225	300	375	450	525	600	675	750	825	900	975	1050
Nominal Length mm													
150	.017												
225	.027	.042											
300	.037	.058	.079										
375	.047	.073	.100	.127									
450	.056	.089	.121	.153	.186								
525	.066	.104	.142	.180	.218	.256							
600	.076	.120	.163	.207	.250	.294	.338						
675	.086	.135	.184	.233	.283	.332	.381	.456					
750	.096	.150	.205	.260	.315	.370	.425	.506	.534				
825	.106	.166	.226	.290	.347	.408	.468	.557	.589	.650			
900	.115	.181	.248	.314	.380	.446	.512	.607	.644	.710	.776		
975	.125	.197	.269	.340	.412	.484	.555	.658	.699	.771	.842	.913	
1050	.135	.212	.290	.367	.444	.522	.609	.709	.754	.831	.908	.986	1.063

DOUBLE DEFLECTION REGISTER (2AR)

Core areas for supply registers

Neck Area	.02	.03	.038	.045	.053	.068	.075	.09	.10	.113	.12	.135	.15	.18	.225	.27	.36	.405	.45	.54	.675	.81
L/S																						
50	A	A																				
100	A	A																				
150	B	B	A																			
200	C	B	B	A	A																	
250	D	C	C	B	B	A	A															
300	E	D	D	C	B	B	B	A														
350	E	D	D	C	C	C	B	B	A													
400	E	E	E	D	C	C	C	B	B	A												
450	E	D	D	C	B	B	B	A														
500	E	E	E	C	C	B	B	A														
600	E	D	C	C	B	B	A															
700	E	D	C	C	C	B	A															
800	E	D	C	C	C	C	B	A														
900	E	D	D	D	C	B	A															
1000	E	E	E	D	B	B	A															
1250	E	D	D	B	A																	
1500	E	E	C	B	A																	
1750	D	C	B	A																		

NRdb Ratings at 22 1/2° A = 20 - 25 B = 25 - 30 C = 30 - 35 D = 35 - 40 E = 40 - 45