

Register
B - 10 Series
Type: Return Air Register
Model : RAR-AB-12H/V
Deflection: Double
Construction: Aluminium
H - Front Horizontal; V - Front Vertical
Description

BETEC CAD. Model RAR-AB-12H is a double deflection return air register, with one set of horizontal aerofoil blades front and one set of vertical blades at the rear and model RAR-AB-12V, with one set of vertical aerofoil blades front and one set of horizontal blades at the rear respectively.

The frame and blade are constructed from high quality aluminum extruded profiles. The blades in these models are individually adjustable to any degree of deflection. The Horizontal and vertical vanes are provided with nylon bushes for rattle free operation.

Standard Construction
Frame

Extruded aluminium profiles with 30 mm flange width.

Blades

Extruded Aluminium aerofoil blades.

Blade Spacing

Standard Blade Spacing of 20 mm.

Damper

Opposed Blade Damper with extruded aluminium frame and blade operated with screw.

Finish

Available with RAL powder coating, please specify color.

Optional Construction
Flange

25 mm Flange width.

Foam Gasket

Provided all around the frame, to prevent leakage of air.

Damper Finish

Black matte.

Filter

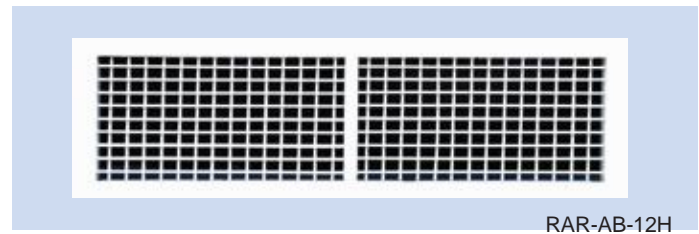
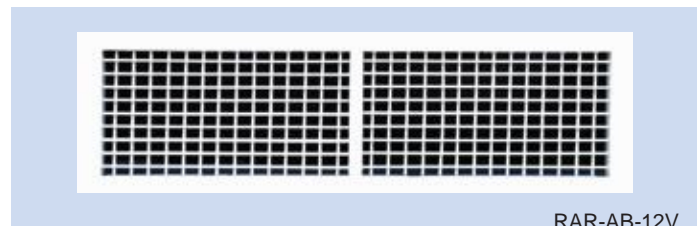
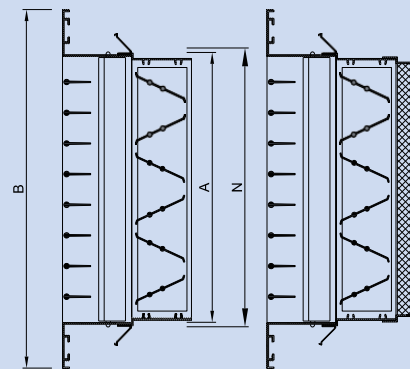
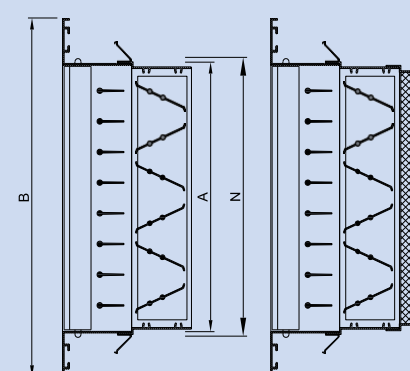
Aluminium media filter.

Finish

Mill finish or Chrome plating.

Frame and Blades

Available in Stainless steel (304/316L).


RAR-AB-12H - Double Deflection

RAR-AB-12V - Double Deflection

Note:

N = Nominal Duct Size, **A** = Neck Size,

B = Overall Size (Face size), **D** = Damper ; **F** = Filter

Selected Products of the company have been Classified / Listed / Tested by various international testing authorities.

Grille

B - 10 Series

Engineering & Performance Data



SAG, RAG, SAR, RAR, EAG,

Size in inches	Neck Velocity (fpm)		300	400	500	600	700	800	900	1000	1100	1200
	Terminal	Velocity (fpm)	50,100,150	50,100,150	50,100,150	50,100,150	50,100,150	50,100,150	50,100,150	50,100,150	50,100,150	50,100,150
8 x 6	Area	CFM	100	133	167	200	233	267	300	333	367	400
	Factor Ak = 0.107	Ps (in.w.g)	0.031	0.055	0.085	0.123	0.167	0.219	0.277	0.342	0.413	0.492
		NC	<15	23	31	36	41	46	49	>50	>50	>50
		Throw (ft.)	29,16,2	34,25,7	40,33,7	44,39,9	47,44,11	49,48,12	52,50,13	55,54,14	56,57,15	59,60,17
16 x 4	Area	CFM	133	178	222	267	311	356	400	444	489	533
	Factor Ak = 0.179	Ps (in.w.g)	0.027	0.047	0.074	0.106	0.145	0.189	0.239	0.296	0.358	0.426
		NC	<15	21	28	34	39	43	47	>50	>50	>50
		Throw (ft.)	28,16,4	33,24,7	38,31,8	42,36,10	44,40,11	46,44,12	49,46,14	51,49,15	52,51,16	55,54,17
18 x 4	Area	CFM	150	200	250	300	350	400	450	500	550	600
	Factor Ak = 0.215	Ps (in.w.g)	0.025	0.044	0.069	0.099	0.135	0.176	0.222	0.275	0.332	0.395
		NC	<15	20	27	33	38	42	46	49	>50	>50
		Throw (ft.)	28,16,4	32,23,8	37,30,9	41,35,11	43,38,12	45,42,13	47,44,14	50,47,15	51,49,16	53,52,17
16 x 6	Area	CFM	200	267	333	400	467	533	600	667	733	800
	Factor Ak = 0.287	Ps (in.w.g)	0.02	0.035	0.055	0.079	0.108	0.141	0.179	0.22	0.267	0.317
		NC	<15	17	25	30	35	40	44	47	>50	>50
		Throw (ft.)	27,16,6	31,22,9	35,27,10	38,31,12	40,34,13	42,37,14	44,39,15	46,41,16	47,43,17	49,45,18
20 x 6	Area	CFM	250	333	417	500	583	667	750	833	917	1000
	Factor Ak = 0.431	Ps (in.w.g)	0.016	0.029	0.045	0.064	0.088	0.115	0.145	0.179	0.217	0.258
		NC	<15	16	23	29	34	38	42	46	49	>50
		Throw (ft.)	26,16,8	30,21,10	33,25,11	36,28,13	38,31,14	40,33,15	41,35,16	43,36,17	44,38,18	46,40,19
16 x 8	Area	CFM	267	356	444	533	622	711	800	889	978	1067
	Factor Ak = 0.467	Ps (in.w.g)	0.015	0.027	0.042	0.061	0.082	0.108	0.136	0.168	0.203	0.242
		NC	<15	15	23	29	34	38	42	45	48	>50
		Throw (ft.)	26,16,8	30,21,10	33,24,12	35,27,14	37,30,15	39,32,16	41,34,17	42,35,18	43,37,19	45,38,19
36 x 4	Area	CFM	300	400	500	600	700	800	900	1000	1100	1200
	Factor Ak = 0.539	Ps (in.w.g)	0.014	0.024	0.038	0.054	0.074	0.096	0.122	0.151	0.182	0.217
		NC	<15	15	22	28	33	38	41	45	48	>50
		Throw (ft.)	26,16,9	29,20,11	32,23,13	34,26,15	36,28,16	38,31,17	40,32,17	41,33,18	42,35,19	43,36,20
16 x 10	Area	CFM	333	444	556	667	778	889	1000	1111	1222	1333
	Factor Ak = 0.611	Ps (in.w.g)	0.012	0.022	0.035	0.05	0.068	0.089	0.112	0.139	0.168	0.2
		NC	<15	15	22	28	33	38	41	45	48	>50
		Throw (ft.)	26,16,10	29,20,12	31,23,13	34,25,15	35,27,16	37,29,17	39,30,18	40,32,19	41,33,20	42,34,20
24 x 8	Area	CFM	400	533	667	800	933	1067	1200	1333	1467	1600
	Factor Ak = 0.828	Ps (in.w.g)	0.012	0.021	0.033	0.048	0.065	0.085	0.107	0.132	0.16	0.19
		NC	<15	16	24	29	35	39	43	46	49	>50
		Throw (ft.)	26,17,11	29,20,13	31,22,15	33,24,17	35,26,18	37,28,19	38,29,20	39,30,21	40,31,22	41,32,22
36 x 8	Area	CFM	600	800	1000	1200	1400	1600	1800	2000	2200	2400
	Factor Ak = 1.151	Ps (in.w.g)	0.023	0.04	0.063	0.09	0.123	0.16	0.203	0.25	0.303	0.36
		NC	21	30	37	43	48	>50	>50	>50	>50	>50
		Throw (ft.)	29,20,13	33,24,16	36,27,19	38,30,21	41,33,23	43,35,24	44,36,26	46,38,27	47,39,28	48,41,29
30 x 10	Area	CFM	625	833	1042	1250	1458	1667	1875	2083	2292	2500
	Factor Ak = 1.241	Ps (in.w.g)	0.025	0.045	0.07	0.101	0.137	0.179	0.226	0.279	0.338	0.402
		NC	24	33	40	46	>50	>50	>50	>50	>50	>50
		Throw (ft.)	30,21,13	34,25,16	37,28,19	39,32,21	43,35,24	45,37,25	46,38,27	48,40,28	49,41,29	50,44,30
32 x 12	Area	CFM	800	1067	1333	1600	1867	2133	2400	2667	2933	3200
	Factor Ak = 1.620	Ps (in.w.g)	0.052	0.092	0.143	0.207	0.281	0.367	0.465	0.574	0.694	0.826
		NC	50	>50	>50	>50	>50	>50	>50	>50	>50	>50
		Throw (ft.)	36,25,12	43,34,18	50,42,22	53,49,24	58,55,28	60,58,29	62,60,33	67,65,34	68,67,35	70,72,39
24 x 24	Area	CFM	1200	1600	2000	2400	2800	3200	3600	4000	4400	4800
	Factor Ak = 2.483	Ps (in.w.g)	0.165	0.294	0.46	0.662	0.901	1.177	1.489	1.839	2.225	2.648
		NC	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50
		Throw (ft.)	62,41,<2	81,72,19	—,—,25	—,—,27	—,—,38	—,—,39	—,—,50	—,—,51	—,—,52	—,—,68

Note:

1. Airflow is measured in Cubic Foot/ minute (CFM).
2. Static Pressure (Ps) is measured in inch water gauge (in.w.g).
3. Noise criteria (NC) is measured in decibals (dB).
4. Terminal velocity and Neck velocity are measured in feet/minute (fpm).
5. Throw is measured in feet (ft).

6. Area factor (Ak) is measured in square meter (m²).
7. Dashed line [-] in the Throw box indicates throw greater than 100 feet and may not be reliable data.

Selected Products of the company have been Classified / Listed / Tested by various international testing authorities.

