

ABC–YGWPA

OUTDOOR AIR INTAKE LOUVRE



USE

Rectangular external louvre for outdoor air in exposed locations.

WATER SEPARATION

ABC-YGWPA is tested according to the standard EN 13030:2001. At speeds up to 3.1 m/s over free area is obtained water separation class A.

DESIGN

ABC YGWPA is a multi-stage outdoor air intake with horizontal blades in the first stage and an efficient rain separator in the second stage (see cross-section on the next page). The mounting frame features a removable blade insert and a small animal proof wire mesh. ABC YGWPA is normally manufactured from patented pre-coated steel in standard building steel colors, but is also available in other materials.

Pre-coated steel in standard colours

Zinc magnesium ZM310

Zinc magnesium ZM120

Aluzinc

Stainless steel

Acid-resistant stainless steel

Titanium zinc

Copper

Aluminium

SIZE

Size 200x200 - 2000x2000 mm.

WxH can be combined optionally.

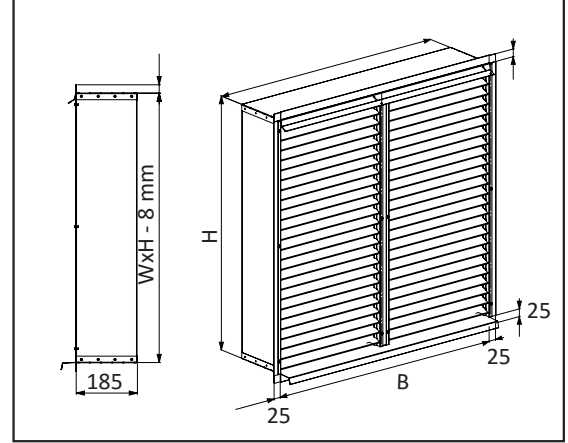
For larger sizes, the louvre is divided into sections.

MAINTENANCE

Inspection of the product should be done at least once a year. Suction of powder snow and aerosols cannot be discounted in unfavourable conditions.

EXAMPLE, DESCRIPTIVE TEXT

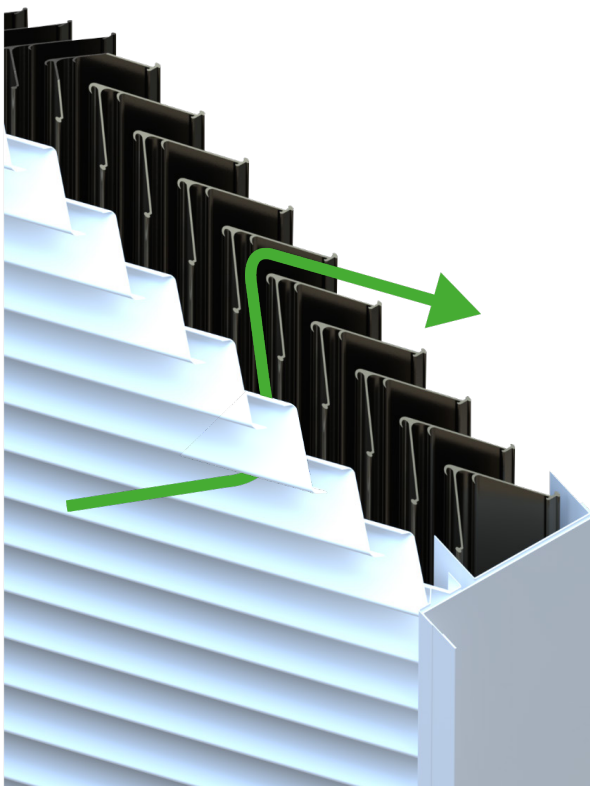
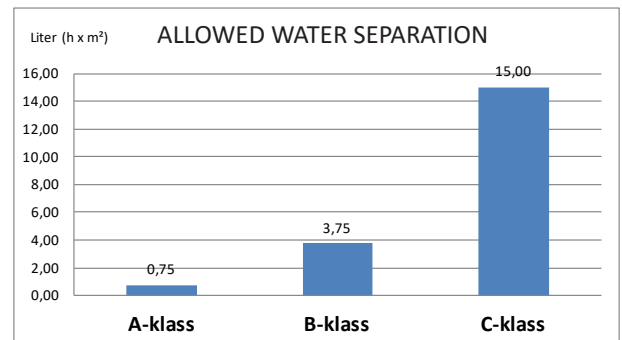
ABC-YGWPA, class A according to EN 13030 for water separation, manufactured by Swegon. Equipped with horizontal blades available in various materials. Size 800 x 800.



WATER SEPARATION CLASSES

Class	Water separation efficiency	Maximum allowed water entrainment of simulated rain in l(h*m2)
A	1 to 0,99	0,75
B	0,989 to 0,95	3,75
C	0,949 to 0,8	15,00
D	Under 0,8	More than 15,00

Tests have been carried out with 13 m/s wind and 75 l/h simulated rain per square meter louvre connection area. During tests, the flow of outside air through louvres has gradually increased. 13 m/s wind has a wind force of 6 on the Beaufort scale (10.8-13.8)

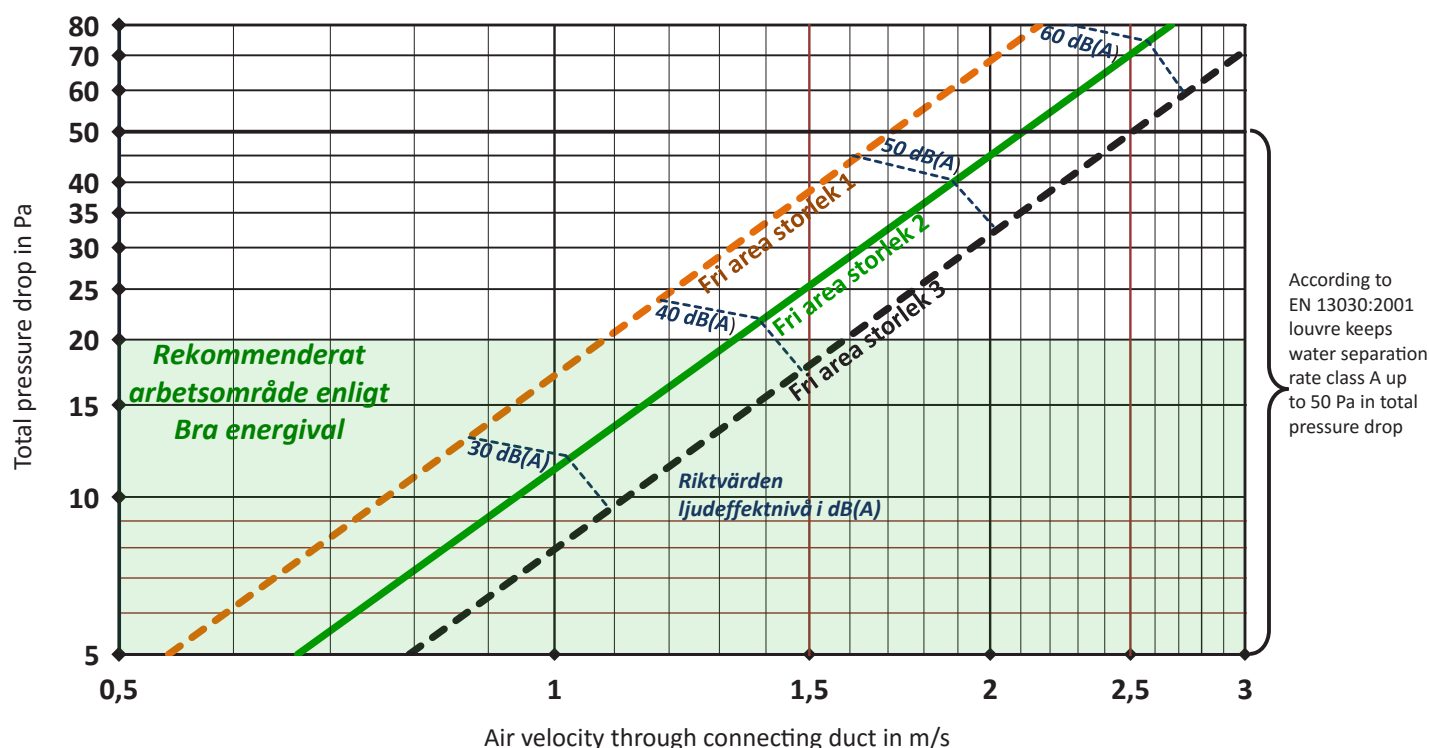


Cross-section of ABC-YGWPA. The visible horizontal blades can be made from various materials to visually match, for example, exhaust louvres or the façade. The vertical plastic blades located behind functions as an efficient rain separator. The arrow indicates the direction of airflow through the louvre.

SELECTION GRAPH

The selection graph gives average value of pressure drop/flow over free area size.

ABC-YGWPA Intake air



ABC-YGWPA free area size table:

W H	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
300	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
400	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
500	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2
600	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
700	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
800	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
900	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3
1000	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3
1100	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3
1200	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3
1300	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3
1400	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
1500	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
1600	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
1700	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
1800	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
1900	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
2000	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

For example:

For a duct or louver size of 1000 × 1000 mm, the airflow through the louver is 1500 l/s (1.5 m³/s).

In the ABC-YGWPA free area table, all louver sizes are classified into three free area groups.

A louver size of 1000 × 1000 mm corresponds to free area size 2.

The air velocity through the duct is calculated by dividing the airflow by the louver area:

$$1.5 \text{ m}^3/\text{s} \div 1 \text{ m}^2 = 1.5 \text{ m/s.}$$

From the diagram, the total pressure drop at an air velocity of 1.5 m/s and for free area size 2 is approximately 25 Pa.

The sound power level is approximately 42 dB(A).

SELECTION TABLES

Exact value of flow

ABC-YGWPA intake air:

Recommended outdoor air flow according to Good energy choices. Average value of air speed through free area 1.94 m/s, total pressure drop 20 Pa.

Unit l/s

H \ W	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
300	97	134	171	209	246	264	301	338	376	413	450	487	525	543	580	617	654	692
400	133	184	236	287	338	364	415	466	517	569	620	671	722	748	799	850	901	953
500	169	236	304	371	439	490	558	625	693	760	828	895	963	1 014	1 082	1 149	1 217	1 284
600	216	303	389	476	562	629	716	803	889	976	1 062	1 149	1 235	1 302	1 389	1 475	1 562	1 649
700	257	361	464	567	670	751	854	958	1 061	1 164	1 267	1 370	1 474	1 554	1 658	1 761	1 864	1 967
800	299	419	539	659	778	873	993	1 113	1 232	1 352	1 472	1 592	1 712	1 806	1 926	2 046	2 166	2 286
900	340	477	614	750	887	994	1 131	1 268	1 404	1 541	1 677	1 814	1 950	2 058	2 195	2 331	2 468	2 605
1000	382	535	688	842	995	1 116	1 269	1 423	1 576	1 729	1 882	2 036	2 189	2 310	2 463	2 617	2 770	2 923
1100	429	602	774	946	1 118	1 255	1 428	1 600	1 772	1 945	2 117	2 289	2 461	2 598	2 771	2 943	3 115	3 287
1200	471	660	849	1 038	1 227	1 377	1 566	1 755	1 944	2 133	2 302	2 491	2 680	2 792	2 981	3 170	3 359	3 548
1300	512	718	923	1 129	1 335	1 499	1 704	1 910	2 116	2 300	2 506	2 711	2 917	3 039	3 245	3 451	3 656	3 862
1400	554	776	998	1 221	1 443	1 620	1 843	2 065	2 287	2 487	2 709	2 931	3 154	3 286	3 509	3 731	3 953	4 176
1500	601	842	1 084	1 325	1 566	1 760	2 001	2 242	2 484	2 700	2 942	3 183	3 424	3 570	3 811	4 052	4 294	4 535
1600	643	901	1 159	1 417	1 675	1 881	2 139	2 397	2 655	2 887	3 145	3 403	3 661	3 817	4 075	4 333	4 591	4 849
1700	684	959	1 233	1 508	1 783	2 003	2 278	2 552	2 827	3 074	3 349	3 623	3 898	4 064	4 339	4 613	4 888	5 163
1800	725	1 017	1 308	1 600	1 891	2 125	2 416	2 708	2 999	3 261	3 552	3 843	4 135	4 311	4 602	4 894	5 185	5 477
1900	767	1 075	1 383	1 691	1 999	2 246	2 554	2 863	3 171	3 447	3 755	4 064	4 372	4 558	4 866	5 174	5 482	5 790
2000	814	1 141	1 469	1 796	2 123	2 386	2 713	3 040	3 367	3 661	3 988	4 315	4 642	4 841	5 169	5 496	5 823	6 150

ABC-YGWPA intake air:

Recommended maximum air flow according to EN 13030:2001. The table reports the maximum air flow at which the louvre still meets class A degree of separation. Average value of air speed through free area approx. 3.1 m/s, total pressure drop 50 Pa.

Unit l/s

H \ W	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
300	155	214	274	333	393	422	481	541	600	660	719	779	838	867	927	986	1 046	1 105
400	213	295	376	458	540	581	663	745	827	908	990	1 072	1 154	1 195	1 277	1 359	1 440	1 522
500	269	377	485	593	701	783	891	999	1 107	1 215	1 323	1 430	1 538	1 621	1 729	1 836	1 944	2 052
600	345	483	622	760	898	1 006	1 144	1 282	1 421	1 559	1 697	1 835	1 974	2 081	2 219	2 358	2 496	2 634
700	411	576	741	906	1 071	1 200	1 365	1 530	1 695	1 860	2 025	2 190	2 355	2 484	2 649	2 814	2 979	3 143
800	478	669	861	1 052	1 244	1 395	1 586	1 778	1 969	2 161	2 353	2 544	2 736	2 886	3 078	3 270	3 461	3 653
900	544	762	980	1 199	1 417	1 589	1 807	2 026	2 244	2 462	2 680	2 898	3 117	3 289	3 507	3 725	3 944	4 162
1000	610	855	1 100	1 345	1 590	1 783	2 028	2 273	2 518	2 763	3 008	3 253	3 498	3 692	3 936	4 181	4 426	4 671
1100	686	961	1 237	1 512	1 787	2 006	2 281	2 557	2 832	3 107	3 383	3 658	3 933	4 152	4 427	4 703	4 978	5 253
1200	752	1 054	1 356	1 658	1 960	2 201	2 502	2 804	3 106	3 408	3 679	3 981	4 282	4 462	4 764	5 066	5 368	5 669
1300	818	1 147	1 476	1 804	2 133	2 395	2 724	3 052	3 381	3 675	4 004	4 332	4 661	4 857	5 185	5 514	5 842	6 171
1400	885	1 240	1 595	1 950	2 306	2 589	2 945	3 300	3 655	3 973	4 329	4 684	5 039	5 251	5 607	5 962	6 317	6 672
1500	961	1 346	1 732	2 117	2 503	2 812	3 198	3 583	3 969	4 315	4 701	5 086	5 472	5 704	6 090	6 475	6 861	7 247
1600	1 027	1 439	1 851	2 264	2 676	3 006	3 419	3 831	4 243	4 613	5 026	5 438	5 850	6 099	6 511	6 924	7 336	7 748
1700	1 093	1 532	1 971	2 410	2 849	3 201	3 640	4 079	4 518	4 912	5 351	5 790	6 229	6 494	6 933	7 372	7 811	8 250
1800	1 159	1 625	2 090	2 556	3 022	3 395	3 861	4 326	4 792	5 210	5 676	6 142	6 607	6 889	7 354	7 820	8 286	8 751
1900	1 225	1 718	2 210	2 702	3 194	3 590	4 082	4 574	5 066	5 509	6 001	6 493	6 986	7 283	7 776	8 268	8 760	9 253
2000	1 301	1 824	2 347	2 869	3 392	3 812	4 335	4 858	5 380	5 850	6 373	6 896	7 418	7 736	8 259	8 782	9 304	9 827

For further dimensioning, visit our product
selection program Electio
<https://swegon-electio.magicad.cloud/>

YGWPA weight kg

H \ W	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
200	3	5	6	7	8	9	11	12	13	14	15	16	18	19	20	21	22	24	25	26	27	28	30	31
300	4	6	7	8	10	11	13	14	15	17	18	20	21	23	24	25	27	28	30	31	32	34	35	37
400	5	7	9	10	12	14	15	17	19	20	22	23	25	27	28	30	32	33	35	37	38	40	42	44
500	6	8	10	12	14	15	17	19	21	23	25	27	29	30	32	34	36	38	40	42	44	45	47	49
600	7	9	11	13	15	17	20	22	24	26	28	30	32	34	36	38	40	43	45	47	49	53	55	57
700	8	10	13	15	17	20	22	24	27	29	31	34	36	38	41	43	45	48	52	54	57	59	61	64
800	9	11	14	17	19	22	24	27	29	32	34	37	40	42	45	47	50	55	57	60	62	65	67	70
900	10	13	15	18	21	24	26	29	32	35	38	40	43	46	49	54	57	59	62	65	68	70	73	76
1000	11	14	17	20	23	26	29	32	35	38	41	44	47	53	56	59	62	65	68	71	74	77	80	83
1100	12	15	18	21	25	28	31	34	38	41	44	47	53	57	60	63	66	70	73	76	79	83	86	90
1200	13	16	19	23	26	30	33	37	40	44	47	54	57	61	64	68	71	75	78	81	85	88	92	96
1300	13	17	21	25	28	32	36	39	43	47	54	58	61	65	69	73	76	80	84	88	91	95	99	103
1400	14	18	22	26	30	34	38	42	46	50	57	61	65	69	73	77	81	85	89	93	97	101	105	109
1500	15	19	24	28	32	36	40	44	48	57	61	65	69	73	77	81	86	90	94	98	102	106	110	115
1600	16	21	25	29	34	38	43	47	56	60	64	69	73	78	82	86	91	95	100	104	108	113	117	122
1700	17	22	26	31	36	40	45	49	59	63	68	72	77	82	86	91	95	100	105	109	114	119	123	128
1800	18	23	28	33	37	42	47	57	61	66	71	76	81	86	90	95	100	105	110	115	119	124	129	134
1900	19	24	29	34	39	44	49	60	65	70	75	80	85	90	95	100	105	110	116	121	126	131	136	142
2000	20	25	30	36	41	46	57	62	68	73	78	83	89	94	99	105	110	115	121	126	131	136	142	148
2100	21	26	32	37	43	48	59	65	70	76	81	87	92	98	104	109	115	120	126	131	137	142	148	154
2200	22	27	33	39	45	56	62	68	74	79	85	91	97	103	108	114	120	126	131	137	143	149	154	161
2300	23	29	35	41	47	59	65	71	77	83	89	94	100	106	112	118	124	130	136	142	148	154	160	167
2400	23	30	36	42	48	61	67	73	79	86	92	98	104	110	117	123	129	135	141	148	154	160	166	173
2500	24	31	37	44	57	63	70	76	83	89	96	102	109	115	121	128	134	141	147	154	160	167	173	180

Installation:

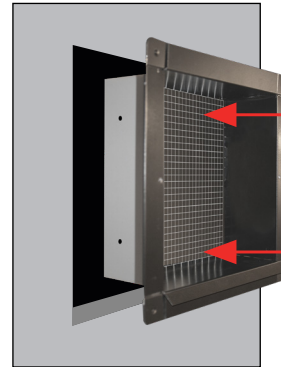
Applies to: ABC-YGWPA



Attachment frame



Lamellainsert



The lamella insert is
screwed in the sides.
Hole: Ø 5mm.

STEP 1:

The dimensions are always stated with the width (B) before the height (H), ex: YGWPA 500x300, 500 width, 300 height. The louvre consists of a mounting frame with removable louvre insert. Start by loosening the mounting screws that secure the louvres insert to the mounting frame. Lift out the insert so that the frame is empty. In larger sizes, one or more U-profiles are in the frame - leave these in place - the frame will then be more stable and easier to mount.



Attach the lamella insert
with the supplied screws.

STEP 2:

Make an opening in the wall according to the size of the louvre. Then mount the frame and attach it with the required fastening material and any sealing compound depending on the type of facade material.

- Carriage of aerosols, powder snow or icing can't be excluded in case of adverse conditions.

STEP 3:

After the attachment frame is fixed to the wall, the insert is put in place and screwed with the supplied screws.

MAINTENANCE

Inspection of the product should be done at least once a year.